1997/1998 Service/Parts Manual

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1997/1998 Chrysler Service Manual

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Warranty Information
1997/1998 Model Year

Should any Mark III conversion require service, the service representative working with your dealership will need the following information to obtain an authorization number for repairs. When Mark III parts are required, call the Mark III Customer Care Center Toll-free number.

Orders placed prior to 3:30 P.M. EST each day will be shipped the following day if it is a stocked item. items which must be assembled or painted require 2 working days after order is placed before shipment. Warranty parts are shipped C.O.D./ R.F.C. (return for credit) or no charge. Non-warranty parts are shipped out C.O.D., plus freight and handling fee (7%). Please use the following telephone numbers:

Service Representative -
1-800-726-8267
FAX -
352-351-2321

Prior authorization is not needed if repairs are within the Mark III allowable guidelines
(Refer to the Labor Times Section of the Service Manual)

Have the following information available when contacting your Mark III Service Representative:
1. Last eight (8) digits of VIN (Vehicle Identification Number) or the Mark III Production number
2. Repair Order Number (Labor Authorizations only)
3. Owner's name, address and phone number.
4. Dealer's name, address and phone number.
5. Date of retail purchase
6. Mileage of van or pickup
7. Description of Mark III parts (page and Item Number from Mark III Parts Manual if available) or OEM parts used.

Note

"CS" in the Mark III Parts Manual represents COLOR SPECIFIC.

8. Itemize defects
9. Itemize labor time per defect and annotate your current shop labor rate.
10. Purchase order is required when ordering warranty or non-warranty parts.

Repair Order Processing Procedures

All warranty repair orders (RO's) will be approved for payment when the following information has been verified and approved:
1. Vehicle identification number.
2. Customer name, address and phone number.
3. Date unit was purchased.
4. Current mileage at time unit was repaired.
5. Dealership hourly labor rate.
6. List each repair and an itemized description of what was actually done to correct the problem. Please indicate "how long" it took to repair.
7. List / describe each part used.

NOTE

If a part is purchased locally, you must call a Mark III Service Representative to obtain prior authorization before locally purchasing the part. This authorization number must appear on the RO.

Sublet Bills, regardless of the dollar amount, must be attached to and submitted with the RO.
Pre-authorized repairs must have the authorization number clearly on the RO. This will help expedite payment.

NOTE

Mark III DOES NOT PAY FOR ANY MARK - UP CHARGES ON SUBLET BILLS, AND WILL NOT PAY ANY LABOR CHARGES IN EXCESS OF ITS PUBLISHED FLAT RATE TIMES.
FAILURE TO PROVIDE REQUIRED INFORMATION REQUESTED WILL RESULT IN THE REPAIR ORDER BEING RETURNED TO THE DEALER AND WILL FURTHER DELAY PAYMENT.

All repair orders must be mailed into the Customer Assistance Center for processing.
Warranty repair work which stays within the allowable labor times (provided in the service manual) will not require prior authorization from a Mark III customer- assistance representative.
Any warranty repair which will exceed the MarkIII allowable labor times (provided in the service manual) must recieve prior authorization from a Mark III Customer Assistance Representative.

Note

If prior authorization is not obtained, you will only be reimbursed for the repair at the Mark III allowable labor time (provided in the service manual) for that repair.

Mark III will not reimburse for: Tax (except New Mexico), Shop supplies, Miscellaneous Materials, Hazardous waste materials, Parts (supplied by Mark III).

SUBMISSION OF WARRANTY REPAIR ORDERS

To keep abreast of changes in our warranty repair processing / payment procedures, Mark III has established ***a (90) ninety day warranty repair cut - off time period,*** This ninety day period will be for authorized. *No exceptions !* This procedure will help expedite our payment to you.
This procedure eliminates one- time, large packages of repair orders being submitted to Mark III for processing, the receipt of authorized repair orders in a timely manner will increase Mark III's processing abilities and expedite payment to you.
The ninety day cutoff period will be from the invoice date of the repair order versus the date Mark III receives the repair order. For example: A repair order dated December 1996 (that is the invoiced date on the repair order) which is received by Mark III in Customer Care Center in April of 1997, would be beyond the 90 day cut- off period. This claim would not be honored and would be returned to the dealer marked VOID. There will be no exceptions to this rule!

Product Display and Protection

In order to insure the customer receives the product in good condition, the dealer **must** see that units in inventory are adequately protected prior to sale.
Units are to be displayed in a manner that would prevent:

1. Damage to interior components.
2. Damage to fabrics, carpets, drapes, etc... by water or sun fade caused by open windows.
3. Exterior finish damage caused by factory precipitates, storage under trees, etc... Exterior finish is to be maintained in accordance with appropriate owner's maintenance instructions.
4. Other damage caused by improper storage.
5. Damage caused by improper storage techniques is considered dealer negligence and will not be considered for warranty adjustment or reimbursement.

Procedure for Returning Parts - Warranty Parts

Mark III will credit dealers for the part and freight only on authorized return for credit items. These parts will be designated on the invoice as **"RFC".** Warranty parts sent "No Charge" cannot be returned **UNLESS** requested by a service representative.

Returned For Credit Parts Procedure (RFC)

* Mark III has initiated a (RFC) Tagging process to assist you in returning a RFC warranty part. This procedure will allow us to process your claim more expediently and credit you faster for your expense of the RFC part.
* This will also help Mark III expedite continuous improvements on our products.
* Return For Credit (RFC) Tag is provided by Mark III when a (RFC) part is sent out. Extras can be sent through our Customer Care Center. The tag must be filled out completely, and attached to the part.
* The part, (RFC) Tag, and a copy of our invoice are to be returned together. If any of these items are missing it will delay the processing of your claim.
* The parts are received in our Return Department and processed daily. If more information is needed (Example: parts or paperwork missing) you will be notified.
* Multiple items may be packaged in one box.
* Although these items are considered defective, proper packaging must be taken to assure that these parts are returned in good condition. So we can analyze the root cause.
* Items lost in shipment are the responsibility of the sender. The sender will need to take appropriate steps with the carrier to retrieve the loss.
* Parts found to be normal wear and tear, customer abuse, lack of maintenance, and/or if no defect is found, then you will be notified.
* If your claim is denied, you will be given a clear explanation.
* If you wish to have the part back, please advise at this time.

Procedure for Returning Parts - New Non-Warranty Parts

All non-warranty parts still in new condition may be returned C.O.D. for the part only. **Freight must be pre-paid.** All material must be in new and re-sellable condition (no defects). A claim number must accompany all parts in order to receive credit. Parts may only be returned **within 90 days** from the date ordered. Any special purchase or special built parts will not be returnable.

The 36 Month/ 36,000 Mile Warranty:

- Under this limited mileage warranty on your Mark III conversion, Mark III warrants that the authorized dealer will repair, replace or adjust all parts that are found to be defective in Mark III-supplied materials and workmanship. The defects must occur under normal use of the vehicle during the warranty coverage period. While Mark III reserves the right to correct any defect on the conversion package, it is recommended that you take your vehicle to your MARK III authorized dealer to ensure your continued satisfaction with the vehicle you purchased.

Coverage Provided

- Mark III Industries, 36 month/ 36,000 mile limited warranty "bumper to bumper" coverage.

- Accessories' Manufacturer Warranties (Separate warranty provided by Manufacturer.)

When does the Warranty Coverage Begin?

- The Mark III 36 month/36,000 mile limited mileage warranty begins on your vehicle's warranty start date which is the earlier of (1) the date you take delivery of your new vehicle, or (2) the date the vehicle was first put into service (for example, as a dealer "DEMO" or as a company vehicle.)

Who is covered?

- The current Mark III owner for the duration of the original warranty.

What Does Your Mark III Warranty Cover?

- All vehicle conversion items are covered. This coverage includes cost of all parts and labor needed to repair any items that are defective in materials or workmanship. You will not be charged for these warranty repairs.

- Note: See exceptions under items not covered.

Mark III Warranty Coverage Overview:

The 97/98 Mark III conversion warranty coverage's and exclusions are listed below. For more details, refer to the "Limited 3 Year/ 36,000 Mile Warranty."

Warranty Items Covered

Component	Warranty Coverage
Carpet	Defects in material; fading; seams separating.
Upholstery	Flaws or defects in fabric; seams coming apart; abnormal wear patterns.
Wood	Cracked or split.
Exterior Paint	Cracked; flaking; fading.
Fiberglass	Structural defects.
Vinyl Graphics	Peeling or fading due to manufacturing or installation.
Seat Frames	Structural defects.
Rear Air Conditioner and Heater	Component failure.
Corrosion	Conversion related.
Seat Belts	The front seat belts are factory. Mid seat and sofa belts are covered against tearing or breakage.
Custom Wheels	Structural Defects.

Warranty Items Not Covered

Component	Warranty Exclusion
Carpet	Stains; normal wear.
Upholstery	Stains; normal wear.
Wood	Scratches; chips.
Exterior Paint	Road hazard, paint chips; scratches.
Vinyl Graphics	Peeling or fading due to harsh chemicals to remove wax or tar.
Rear Air Conditioner and Heater	Lack of normal maintenance.
Light Bulbs	Except for those noted at delivery.
Corrosion	Surface.
Custom Wheels	Normal wear and tear; problems due to improper maintenance or if improper cleaning agents are used. Wheel alignment, torquing and balancing are not covered by this warranty

Accessories Manufacturer Warranties:

- Many accessories installed on Mark III conversions have separate warranties offered by the accessory manufacturer. Written warranties by manufacturers of these products are provided with each new conversion. The items include, but are not limited to Television, CD Player, Headphone Systems, Rear Air Conditioner Systems, Fabrics, and Tires.

Limited Original Equipment Manufacturer Warranty:

- Your chassis Manufacturer Warranty covers automotive chassis, engine, drive train and other items that have been produced by the original equipment manufacturers. For details on your OEM Warranty refer to your factory Warranty Book.

What is not covered?

- Damage caused by lack of maintenance or any liquid not recommended in the owner's manuals. Mark III recommends that you keep all receipts and make them available if questions arise about maintenance.

- Damages to your vehicle that results from fire, accident, theft, vandalism, riot, explosion, or objects striking the vehicle.

- Misuse of the vehicle, driving over curbs, overloading, racing, or other competition.

- Damage that results from alteration to the vehicle, or misusing the conversion package. In addition any alterations to the odometer will result in the voiding of the warranty coverage.

- Deterioration due to use and exposure are not covered by the warranty. The instructions in the owner's manual regarding the care of paint, trim, upholstery, glass and other appearance items should be followed closely.

- Removal of conversion parts to repair defective Original Equipment Manufacturer parts.

- "Incidental or Consequential Damages" connected with the failure of your vehicle under warranty. Such damages include but are not limited to, lost time; inconvenience; the loss of the use of your vehicle; the cost of rental cars; gasoline; telephone expenses; travel or lodging; the loss of personal or commercial property; the loss of revenue; etc. as allowed by state law.

- Mark III does not warranty the automotive chassis.

- The repair or replacement of items such as soft trim, interior trim, and other appearance items manufactured and installed by Mark III is confined to cases where the item is defective and not to cases involving wear, neglect or accident.

- Imperfections in body trim paint; exterior moldings and/or vinyl graphics applied by Mark III are normally apparent during new vehicle inspection by the dealer and/or retail customer and are to be corrected then. For your protection, we suggest that if you find any Mark III-related paint or appearance defects, report them to your dealer immediately, as normal wear and tear due to use and exposure is not covered by this warranty.

- Mark III does not cover any and all parts supplied with the automotive chassis by the chassis manufacturer. These include, but are not limited to, engine, frame, transmission, factory air conditioner and heater, axles, brakes, suspensions, tires, batteries, exterior paint defects, and factory body defects (weld marks, minor factory defects, etc.). Consult the chassis manufacturer’s warranty regarding these items.

Items Not Covered Continued:

- Custom wheels are warranted for three (3) years or thirty-six thousand (36,000) miles in cases of structural defects. Normal wear and tear due to use and exposure or other problems due to improper maintenance or improper torquing of the wheels are not covered by this warranty. Retorquing of wheels per Mark III Owner's Manual Wheel Maintenance is considered Normal Maintenance and is not covered by this warranty (See Mark III Owner's Manual Wheel Maintenance.)
- This warranty does not cover alterations or equipment added to the Mark III conversion or chassis by the dealer or other sources or problems with other components related to such alterations or additions.
- The cost of repairing damage caused by environment factors or "Acts of God." "Environmental factors" include but are not limited to such things as airborne fallout, chemicals, tree saps, salt, ocean spray and road hazards. "Acts of God" includes, but are not limited to, such things as hail storms, wind storms, tornado's, sand storms, lightning, floods, hurricanes, earthquakes, the application of chemicals or sealants subsequent to manufacture, etc., is not covered. **See Chemical Paint Spotting**.
- Any part that was replaced under warranty will be covered for the duration of the original conversion warranty only.
- The tire manufacturer warrants tires. The tire warranty is included with your Mark III package.
- **Maintenance -** Normal Maintenance such as those detailed in the Factory Owner's manual and the Mark III Owner's Manual are not covered and are the owner's expense. Also, items requiring replacement or repair from routine wear, use, and exposure are not covered.

Chemical Paint Spotting:

- Some weather and atmospheric conditions can create chemical fallout. Air borne pollutants can fall and may damage painted surfaces on your vehicle. This damage can take many forms, including blotching/ringlet shaped discoloration's and small irregular dark spots etched into the painted surfaces. Chemical paint spotting is not covered by warranty.

Interior/Exterior Paint, Trim, and Appearance Items:

- Defects in paint, trim, upholstery or other appearance items are normally corrected during new vehicle inspections. If you find any paint or appearance concerns advise your dealership as soon as possible. Deterioration due to use and exposure are not covered by the warranty. The instructions in the owner's manual regarding the care of paint, trim, upholstery, glass and other appearance items should be followed closely.

☛ Note:

Cosmetic or surface corrosion (resulting from stone chips, scratches in the paint, for example) is not included in the Paint, Trim, and Appearance Items coverage.

Mark III Original Equipment Alterations:

- This warranty does not cover any damage or failure resulting from modification or alteration to the Mark III conversion equipment, as manufactured or assembled by Mark III industries.

Production Changes:

- Mark III Industries reserves the right to make changes in vehicles built or sold by them at any time without incurring any obligation to make the same or similar changes on vehicles previously built or sold by Mark III Industries.

Roadside Assistance:

- For Roadside Assistance programs. Refer to your factory owner's manual.

Sheet Metal Coverage:

- **Corrosion**: Body sheet metal panels are covered against rust for 3 years or 36,000 miles, whichever comes first.

☛Note:
Cosmetic or surface corrosion (resulting from stone chips, scratches in the paint, for example) is not included in the sheet metal coverage.

Other Warranty Terms:

- This warranty gives you specific legal rights in addition to other legal rights that vary from state to state.
- Mark III Industries does not authorize any person, dealer, and/or other entity to create for it any other obligation or liability with your Mark III Conversion vehicles.
- Any implied warranty of merchantability or fitness for a particular purpose applicable to this vehicle is limited in duration to the duration of the written warranty. Performance of repairs and needed adjustments is the exclusive remedy under this written warranty or an implied warranty. Mark III Industries shall not be liable for incidental or consequential damages (such as, but not limited to, loss wages or vehicle rental expenses) resulting from breech of this written warranty or any implied warranty *

  * Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusions may not apply to you.

Customer Assistance:

Your complete satisfaction is important to your dealer and Mark III. Mark III will assist you in resolving any misunderstanding or conversion-related problem if you have already tried to have your concerns addressed by your dealer. If any concern has not been resolved, despite the best intentions of all concerned, the following steps should be taken:

1. Contact a member of your dealership management. Most complaints are quickly resolved at this level.
2. If it appears the dealership management cannot resolve your problem, contact Mark III's Customer Care Center by calling **1-800-726-8267**.
3. Please have the following information available to give our customer assistance representative.

- Your name, addresses, and telephone number.
- Mark III production number. (This is available on the manufacturing label attached to the driver's doorpost.)
- Delivery date and current mileage.
- Nature of problem/ history of repairs.

When contacting Mark III for assistance, please remember that our initial effort will be to give your dealer all possible assistance in resolving your problem, using the dealer's facilities, equipment and personnel.
If you are still not satisfied after trying steps 1 through 3, please contact Mark III Customer Care Center by writing:

Attn.: Customer Care Center
Mark III Industries
PO Box 2525
Ocala, Florida, 34478

We will review your case and contact you with the outcome of our review.

Transportation Damage

If you find damage, vandalism or missing items, upon delivery of a unit perform the following immediately:

Attention:
Damage Must Be Noted On A Mark Iii Inspection Sheet:
☛ **Note**
Driver and a dealer representative must sign (all sheets.)
Photos may be required on bumper damage and dents
Tax-exempt on labor we do not pay G.O.G.

Please Follow Procedures Listed Below

1. Call transport claims within 72 hours of delivery.
2. Fax estimate (352-732-0071) and inspection sheet (noting all damage).
   (All claims must be reviewed)
3. Call for authorization number on repair order and fax to 1-352-351-2321.
4. Approved repairs can be done.
5. We can not issue payment from an estimate we need your official repair order

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1997/1998 Chrysler
Ram Van SWB
Labor Times

HT - High Top
LT - Low Top

CFA - Call For Authorization

Item	R & R
A	
A/C Return Grill	0.2
A/C Blower Motor and/or wheel	1.5
A/C Discharge Hose (H.P.)	1.0
A/C Fuse	0.1
A/C Louver/ Vent	0.1
Antenna, Styrofoam (LT)	1.5
Antenna, Foil (HT)	2.0
Antenna, Balm	0.5
Air Compressor	0.4
Ashtray	0.1
B	
C	
Carpet	CFA
Carpet Mats	0.2
Carpet Protector, Rear Cargo	0.1
CD Player, (Main Unit)	1.0
CD Player, FM Modulator and/or Cable	1.0
CD Player Frame	0.1
Center Beam, Wood Insert	0.3
Center Beam Molded Plastic Complete	1.0
Clothes Hook, Fold down (HT)	0.2
Console, Floor (TV) (Van)	1.0
Console, Overhead (van)	0.3
Cup Holder, Folding	0.2
Cup Holder, Temp. Controlled	1.0
D	
Door, TV (Repair Kit)	0.1
Door, Smart Fuse Block	0.2
Door, Storage	0.2
E	
Engine Cover	1.0
Electrical	CFA
F	
Face Plate, Complete	0.8
Face Plate, Right Side (HT)	0.3
Face Plate, Left Side (HT)	0.3
Flash Light	0.2
Fuse	0.1
G	
Game Ready Control Panel	0.2
Gimp. Door	0.3
Graphics	CFA

HT - High Top
LT - Low Top

CFA - Call For Authorization

H	
Handle, Pull	0.3
Headboard (LT)	1.5
Headboard (HT)	2.0
Head Board Wood Trim	0.2
Headliner (LT)	1.5
Headliner (HT)	2.0
Headphone, Jack	0.2
Head Phone	0.1
I	
J	
Jack Kit	0.5
K	
L	
Light, Map	0.3
Light, Step Well	0.2
Light, Center Beam	0.3
Light, Valance	0.5
M	
N	
O	
P	
Panel, Door (Front)	0.5
Panel, Door (Side or Rear)	0.5
Panel, Speaker (Rear Wall)	1.0
Q	
R	
Radio, Deluxe Wall	0.5
Running Board, Fiberglass, each	1.0
Running Board, Aluminum, each	0.75
Running Board Bracket	0.5
S	
Seat Cover. Front & Mid	1.0
Seat Cover Sofa Back	1.0
Seat Cover Sofa Bottom	1.0
Seat, Arm Rest	0.2
Seat, Arm Rest Covers	0.3
Seat, Front & Mid, W/O Ped	0.5
Seat, Front & Mid With Ped	0.75
Seat, Removable with Shrouds	1.0
Shades	0.2
Sill, Window	0.2
Smart Fuse Block	0.2
Storage Comp. Rear Wall, each	0.2
Sofa/Bed (Complete Unit)	1.0
Sofa Back (Plastic)	0.2
Sofa Motor	0.4
Sofa Controller (Intellitec)	0.2

HT - High Top
LT - Low Top

CFA - Call For Authorization

Sofa Frame Replacement	1.5
Sofa Foot Rest	0.4
Sofa Arm rest	0.2
Sofa Arm Rest Cover	0.3
Sofa Head Rest	0.3
Sofa Head Rest Cover	0.4
Speaker, Grill	0.2
Speaker, TV	0.2
Speaker, Radio	0.2
Sport Top Upper Wall	1.0
Step Plate	0.2
T	
Trash Bin	0.1
TV, (LT)	0.3
TV, (HT)	0.5
TV Remote	0.1
TV Frame	0.2
U	
V	
Valance	0.4
Visor	0.
VCP (LT)	0.3
VCP (HT)	0.5
VCP Frame (HT)	0.2
W	
Wall, Deluxe, LX	1.0
Wall, deluxe, LE, STD.	0.75
Wall, Driver Side	CFA
Wall, Passenger Side	CFA
Wheel	0.4
Window Shroud (Plastic)	0.5
Window W/ Ring	1.0
Window Ring	1.5
Window Frame (Wood)	1.0

1997/1998 Chrysler
Ram Van LWB
Labor Times

HT - High Top
LT - Low Top

CFA - Call For Authorization

Item	R & R
A	
A/C Return Grill	0.1
A/C Blower Motor and/or wheel	1.5
A/C Discharge Hose (H.P.)	1.0
A/C Fuse	0.1
A/C Louver/ Vent	0.2
Antenna, Styrofoam (LT)	1.5
Antenna, Foil (HT)	2.0
Antenna, Balm	0.5
Air Compressor	0.4
Ashtray	0.1
B	
C	
Carpet	CFA
Carpet Mats	0.2
Carpet Protector, Rear Cargo	0.1
CD Player, (Main Unit)	1.0
CD Player, FM Modulator and/or Cable	1.0
CD Player Frame	0.1
Center Beam, Wood Insert	0.2
Center Beam Molded Plastic Complete	1.0
Clothes Hook, Fold down (HT)	0.2
Console, Floor (TV) (Van)	1.0
Console, Overhead (van)	0.4
Cup Holder, Folding	0.2
Cup Holder, Temp. Controlled	1.0
D	
Door, TV (Repair Kit)	0.2
Door, Smart Fuse Block	0.2
Door, Storage (All)	1.0
E	
Engine Cover	1.0
Electrical	CFA
F	
Face Plate, Complete	0.6
Face Plate, Right Side (HT)	0.3
Face Plate, Left Side (HT)	0.3
Flash Light	0.2
Fuse	0.1
G	
Game Ready Control Panel	0.2
Gimp. Door	0.3
Graphics	CFA

HT - High Top
LT - Low Top

CFA - Call For Authorization

H	
Handle, Pull	0.2
Headboard (LT)	1.5
Headboard (HT)	2.0
Head Board Wood Trim	0.2
Headliner (LT)	1.5
Headliner (HT)	2.0
Headphone, Jack	0.2
Head Phone	0.1
I	
J	
Jack Kit	0.5
K	
L	
Light, Map	0.3
Light, Step Well	0.2
Light, Center Beam	0.3
Light, Valance	0.3
M	
N	
O	
P	
Panel, Door (Front)	0.5
Panel, Door (Side or Rear)	0.5
Panel, Speaker (Rear Wall)	1.0
Q	
R	
Radio, Deluxe Wall	0.5
Running Board, Fiberglass, each	1.0
Running Board, Aluminum, each	0.75
Running Board Bracket	0.5
S	
Seat Cover. Front & Mid	10
Seat Cover Sofa Back	1.0
Seat Cover Sofa Bottom	1.0
Seat, Arm Rest	0.2
Seat, Arm Rest Covers	0.3
Seat, Front & Mid, W/O Ped	0.5
Seat, Front & Mid With Ped	0.75
Seat, Removable with Shrouds	1.0
Shades	0.2
Sill, Window	0.2
Smart Fuse Block	0.2
Storage Comp. Rear Wall, each	0.3
Sofa/Bed (Complete Unit)	1.0
Sofa Back (Plastic)	0.2
Sofa Motor	0.4
Sofa Controller (Intellitec)	0.2

HT - High Top
LT - Low Top

CFA - Call For Authorization

Sofa Frame Replacement	1.2
Sofa Foot Rest	0.4
Sofa Arm rest	0.2
Sofa Arm Rest Cover	0.3
Sofa Head Rest	0.3
Sofa Head Rest Cover	0.4
Speaker, Grill	0.1
Speaker, TV	0.1
Speaker, Radio	0.2
Sport Top Upper Wall	1.0
Step Plate	0.3
T	
Trash Bin	0.1
TV, (LT)	0.3
TV, (HT)	0.5
TV Remote	0.2
TV Frame	0.2
U	
V	
Valance	0.4
Visor	0.4
VCP (LT)	0.3
VCP (HT)	0.4
VCP Frame (HT)	0.2
W	
Wall, Deluxe, LX	1.0
Wall, deluxe, LE, STD.	0.75
Wall, Driver Side	2.0
Wall, Passenger Side	2.0
Wheel	0.4
Window Shroud (Plastic)	0.5
Window W/ Ring	1.0
Window Ring	1.0
Window Frame (Wood)	1.0

1997/1998 Chrysler
Caravan/ Voyager
Labor Times

HT - High Top
LT - Low Top

CFA - Call For Authorization

Item	R & R
A	
B	
C	
Carpet	CFA
Carpet Mats	0.1
CD Player, (Main Unit)	1.0
CD Player, FM Modulator and/or Cable	1.0
CD Player Frame	0.1
Center Beam , Complete	0.5
Console, Floor (TV)	0.4
Console, Overhead	0.3
D	
Door, TV (Repair Kit)	0.2
E	
Electrical	CFA
F	
Face Plate, Complete	0.5
Flash Light	0.1
Fuse	0.1
G	
Game Ready Control Panel	0.2
Gimp. Door	0.3
Graphics	CFA
H	
Handle, Pull	0.3
Headboard (LT)	1.5
Headboard (HT)	2.0
Head Board Wood Trim	0.2
Headliner (LT)	1.5
Headliner (HT)	2.0
Headphone, Jack	0.2
Head Phone	0.1
I	
J	
K	

HT - High Top
LT - Low Top

CFA - Call For Authorization

L	
Light, Map	0.2
Light, Center Beam	0.3
Light, Valance	0.2
M	
N	
O	
P	
Panel, Door (Front)	0.5
Panel, Door (Side or Rear)	0.5
Panel, Speaker (Rear Wall)	1.0
Q	
R	
Running Board, Fiberglass, each	1.0
S	
Seat Cover. Front & Mid	0.75
Seat Cover Sofa Back	1.0 + FACTORY
Seat Cover Sofa Bottom	1.0 + FACTORY
Seat, Arm Rest	0.2 + FACTORY
Seat, Arm Rest Covers	0.3 + FACTORY
Seat, Front & Mid With Ped	0.75 + FACTORY
Sofa/Bed (Complete Unit)	1.0 + FACTORY
Sofa Arm rest	0.3 + FACTORY
Sofa Arm Rest Cover	0.4 + FACTORY
Sofa Head Rest	0.4 + FACTORY
Sofa Head Rest Cover	0.5
Speaker, Grill	0.1
Speaker, TV	0.3
Speaker, Radio	0.3
Sport Top Upper Wall	1.0

HT - High Top
LT - Low Top

CFA - Call For Authorization

T	
TV, (LT)	0.3
TV, (HT)	0.5
TV Remote	0.1
U	
V	
Valance	0.2
Visor	0.3
VCP (LT)	0.3
VCP (HT)	0.3
W	
Wheel	0.4

1997/1998 Chrysler
Ram and Dakota Pickups
Labor Times

CFA – Call For Authorization

Item	R & R
A	
B	
Bug Shield	0.3
C	
CD Player, (Main Unit)	0.3
CD Player, FM Modulator and/or Cable	1.0
Console Overhead	0.3
D	
E	
Electrical	CFA
F	
Fuse	0.1
G	
Graphics	CFA
H	
I	
J	
K	
L	
Light, Auxiliary (Fog)	0.2
Light, Map	0.2
M	
N	
O	
P	
Q	
R	
Running Board, Fiberglass, each	1.0
Running Board Bracket	0.2
S	
Seat Cover	1.0
Seat, Arm Rest	0.2
Seat, Arm Rest Covers	0.2
Step Tube	0.4
T	
U	
V	
W	
Wheel	0.4

1997/1998 Chrysler
JEEP GRAND CHEROKEE
Labor Times

CFA - Call For Authorization

Item	R & R
A	
Air Compressor	0.3
Antenna, Antenna (Center Mount)	7.7
Antenna, Antenna (Left Mount)	6.2
Antenna, TV	6.2
B	
“B” Pillar Upper Shroud	0.2
Box, Rear Storage (replace box)	2.2
Box, Rear Storage (replace components)	2.2
Brush Guard, Front	1.2
Brush Guard, Tail Light	0.3
C	
Carpet Protector, Rear Cargo	0.1
CD Player, (Main Unit)	1.0
CD Player, FM Modulator and/or Cable	6.2
CD Player Remote (wired)	0.4
“C” Pillar Shrouds, Upper	0.2
Console, Overhead, Front	0.3
Console, Overhead, Rear	0.3
D	
Dash Wood Kit Per Piece	0.2
Door Wood Kit Per Piece	0.2
E	
Electrical	CFA
Exterior Logo on Door	0.2
F	
Fuse Block	0.5
G	
Game Ready Control Panel	0.2
GPS Telepath	0.5
Graphics	CFA
Grill, Front	0.4
H	
Handle, Pull	0.2
Hatch (Rear Door) Shroud L & R	0.2
Hatch (Rear Door) Shroud Upper	0.2
Hatch (Rear Door) Step Plate	0.3
Head Phone	0.1
Headliner	6.0
Headphone, Jack	0.1
I	
J	
K	

CFA - Call For Authorization

L	
Light, Fog (PIAA)	0.5
M	
N	
Noise Choke	CFA
O	
P	
Panel, Door Front	0.3
Panel, Door (Side or Rear)	0.3
Panel Speaker (Rear Wall)	0.1
Q	
R	
Rear Box	0.5
Roof Rack	1.0
S	
Seat Belt	0.4
Seat Cover. Front & Rear	0.8
Seat, Front and Rear W/O Ped	0.3
Seat, Front and Rear with Ped	0.6
Speaker Grill	0.1
Speaker, TV	0.2
Step Tube	0.5
Sun Roof Electric	CFA
Sun Roof Manual	CFA
Sun Roof Switch	0.2
T	
Tire Carrier Assembly	3.0
TV Amplifier	0.5
TV Base (Wood)	0.2
TV Remote	0.1
TV Removal	0.5
TV Speaker Switch	0.2
U	
V	
VCP	1.0
Visor	0.2
W	
Wheel	.4
Window, Sport Top (Clear)	CFA
Window, Sport Top (Smoked)	CFA
Window, Sport Top Shroud	.2

1997/1998
Rear Air and Heat
Labor Times

CFA - Call For Authorization

Item	R & R
Pressurize, diagnose, leak test, drain, evacuate, charge, recover – Note 1	**1.0**
Cooling system diagnose – Note 1	**0.5**
A/C system diagnose – Note 1	**0.5**
Power Pack – replace (includes diagnose, leak test, drain, etc.)	**2.0**
Core - replace	**1.2**
Blower - replace	**0.5**
Relay - replace	**0.5**
Resistor - replace	**0.5**
Wiring - repair	**0.8**
Fuse – Replace (includes system check)	**0.5**
Switch - replace	**0.5**
Expansion Valve - replace	**0.5**
Water Valve - replace	**0.5**
Heater Hose Wye – replace (one or more)	**0.6**
Hose clamp – replace (one or more)	**0.5**
Heater hose – repair (each)	**0.5**
Refrigerant hose – replace (one or more) Ford and Dodge	**1.5**
Refrigerant hose – Suction Hose - replace Astro/ Safari	**2.5**
Refrigerant hose – Liquid Hose - replace Astro/ Safari	**2.0**
Refrigerant hose – Suction Hose - replace GMT-600	**2.0**
Refrigerant hose – Liquid Hose - replace GMT-600	**2.0**
Refrigerant hose – repair (each)	**0.5**
Fitting – replace or repair (each)	**0.8**

Note1 – can be used in addition to other operations

LWB Full-Size Van Procedures

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1997/1998 Dodge LWB

Low Top

Carpet

1. Remove all seating.
2. Remove Engine cover.
3. Remove all door step plates.
4. Remove all window sill wood.
5. Remove 2 screws in window frame that were exposed after sill removal.
6. Remove deluxe wall (refer to procedure) if equipped.
7. Remove both rear storage cabinets installed in walls, if equipped.
8. Remove sofa control module.
9. Remove jack and jack handle, remove jack base plate.
10. Remove all seat belt anchor bolts secured at floor.
11. Remove TV console if equipped.
12. Beginning at rear cargo doors grasp carpet and lift upward removing carpet from flooring, moving toward the front of the van roll carpet as it is freed. If you encounter difficulty with carpet that is wedged under the walls gently grasp the bottom of the wall and the window frame and pull outward. This will lift the wall away from the carpeting allowing you to pull it free, * Note carpet is stapled along the edges of the rear fender wells and will require extra effort to release. Ensure that all staples are removed prior to installing the new carpet.

Center Beam, Molded Plastic

1. Remove map light cover and unscrew housing. Remove map lights.
2. Remove exposed screws.
3. Remove screws from center wood insert.
4. Remove exposed screws from molded plastic center beam, lower center beam.
5. Disconnect electrical connector and remove center beam.
6. If vehicle is equipped with rear air unscrew the outer male from the inner female outlet.

Door Panel, Passenger & Driver Front

1. Remove factory door handle.
2. Grasp insert on upper door panel and pull outward until retainers are free from door, disconnect electrical connector.
3. Remove exposed screws.
4. Remove retainer screw from bottom front corner of door panel (exposed).
5. Grasp door panel at top edge and pull outward and pull upward to free.
6. Bottom door panel, grasp edges of panel and pull outward until retainers are free.

Door Panel, Cargo Doors, Rear

1. Remove door handle bezel (2) screws, passenger side.
2. Grasp edge of door panel at top and pull outward until you feel retainers are free.
3. Continue this motion all around panel to complete process.

Door Panel, Cargo Door, Side (Front)

1. Remove caps from pull handle by unsnapping.
2. Remove exposed screws, remove handle.
3. Remove screws from molded mag rack/ cup holder, if equipped.
4. Remove fold down cup holder screws, if equipped.
5. Remove factory door handle bezel.
6. Grasp edge of door panel at top and pull outward until retainers are free. Continue this motion all around panel to complete process.

Door Panel, Cargo Door, Side (Rear)

1. Remove caps from pull handle by unsnapping.
2. Remove 4 exposed screws, remove handle.
3. Grasp edge of door panel at top and pull outward until retainers are free. Continue this motion all around panel to complete process.

Head Board

1. Remove map light cover and unscrew housing. Remove map lights.
2. Unsnap faceplate switch cover, this exposes 4 screws, and remove. Pull straight back on switch plate and disconnect 3 plug in connectors, if equipped.
3. Remove headboard wood trim piece.
4. Reach through hole where switch assembly was, grasp and pull straight back until headboard clips are free from factory lip in roof.
5. Tilt rear of headboard down and pull rearward until free.

Headliner

1. Remove map light covers and unscrew housing. Remove lights from center beam.
2. Remove center beam per procedures.
3. Remove rear map light covers and unscrew housings located in headliner. Remove lights from center beam.
4. Remove valances per procedures.
5. Remove headboard (refer to procedure).
6. Remove screws from headliner, located where center beam was.
7. Slide forward until rear cleats release from factory roof lip.
8. Remove headliner.

Panel, Speaker, Rear

1. Remove rear storage cabinets in passenger sidewall, if equipped.
2. Using razor knife cut fabric along door edge, pull fabric loose to expose screws.
3. Remove screws.

Seat Belt, Center and Rear

1. Remove screws from valance wood trim, pull out and disconnect plug in connector.
2. Remove valance.
3. Remove wall per procedures.
4. Remove seat belt plastic insert from wall.
5. Remove 2 nuts from seat belt retainer

☛ **(Critical items ensure when reinstalling seat belt that these 2 nuts are torqued to 6 to 8 foot lbs.).**

6. Pull back seat belt boot located on floor which will expose seat belt anchor bolt, remove

☛ **(Critical items ensure when reinstalling seat belt anchor bolt that it is torqued to 22 to 28 foot lbs.).**

Seat Belt Driver

1. Remove valance wood trim.
2. Remove seatbelt.

Seat Belt Sofa Lap

1. Peel back seat belt boot cover exposing mounting bolt, remove bolt.
2. Pull seat belt through elastic retaining loop in sofa remove.

☛ **(Critical item seat belt mounting bolt must be torqued when reinstalling 22 to 30 foot pounds)**

Shade Cargo Door, Side And Rear

1. Locate shade retainer clips behind shade and using thumb press down on bottom clip and pull out on shade until it releases from clip.
2. Grasp shade string at bottom where grommet enters into door shroud and pull outward until string grommet releases from hole, repeat procedure for other string.

Shade, Vista Bay Windows

1. Remove 3 screws attaching shade to top of window.
2. Remove screw from shade string tensioners located at bottom of window.

Shroud, Rear Cargo Doors

1. Remove window shade; refer to shade removal procedure.
2. Remove door panel; refer to door panel removal procedure.
3. Remove screws.
4. Remove screws from factory window latch.
5. Grasp shroud and pull outward to remove.

Shroud, Side Cargo Doors

1. Remove window shade; refer to shade removal procedure.
2. Remove door panel; refer to door panel removal procedure.
3. Remove screws.
4. Remove screws from factory window latch.
5. Remove door lock knob by unscrewing and pulling up.
6. Grasp shroud and pull outward to remove.

Sofa Motor

1. Remove sofa motor shroud.
2. Remove right side bolt from sofa frame attaching bracket to motor. (This releases bracket).
3. Remove 5/16" nuts from end of sofa motor on both sides.
4. Unplug power wires from control module.
5. Grasp and pull drive cable loose from motor.
6. Remove sofa motor.

Sofa Motor Control Module

1. Unplug 2 connectors from module
2. Remove screws from base

TV

1. Grasp edges and pull forward.
2. Disconnect RCA cable from video in and audio in (color-coded).
3. Remove coax cable.
4. Remove external speaker connection.
5. Remove DC power input cable.

TV Console

1. Remove VCP (refer to VCP removal procedure).
2. Remove TV (refer to TV removal procedure).
3. Remove 2 screws in L bracket located inside frame attached to floor.
4. Grasp console and lift upward while guiding VCP and TV wires through opening in rear of console.

Valance

1. Remove shades per procedure.
2. Remove screws that were exposed upon shade removal.
3. Remove valance wood trim.
4. Remove exposed pod screws.
5. Remove screws inside valance cutouts.
6. Untuck material from front and rear of valance to expose screws.
7. Remove screws from front and rear valances and lower valances.

VCP

1. Remove TV (refer to TV removal procedure).
2. Remove 2 screws attaching VCP bracket from underneath (Top of edge of console where TV was removed from).
3. Grasp VCP by edge pull straight back until out of console.
4. Disconnect RCA jacks and power wire.

Wall, Deluxe

1. Open smart block fuse door. Disconnect smart block harness from smart block (3 connectors). Re-position harnesses through cut out in compartment.
2. Remove hidden screws from behind fuse block.
3. Remove screws from windowsill plate and remove.
4. Reach through opening in windowsill and disconnect connector from rear of CD player and/or rear radio (if equipped).
5. Grasp CD player/ rear radio and remove (if equipped).
6. Remove rear screw from top of deluxe-wall sill, untuck fabric from rear corner and remove hidden screw.
7. Untuck fabric at front of deluxe wall and remove hidden screw under fabric,

☛ (Untuck fabric by placing putty knife under edge and prying gently out, grasp fabric to expose screw).

8. Lift straight up on deluxe-wall approximately 2” to release from cleat. Continue lifting upward and remove.

Wall, Driver Side

1. Remove driver center seat.
2. Remove sofa.
3. Peel back wall fabric from driver doorpost and expose-hidden screws, remove all screws.
4. Remove video game center control plate, if equipped.
5. Remove rear speaker.
6. Remove Deluxe wall, refer to procedure.
7. Remove rear storage cabinet, refer to rear storage cabinet removal procedure).
8. Remove valance, see procedure.
9. Remove shades driver side front and rear, (Refer to procedure).
10. Remove window sill top plates front and rear windows, remove counter sunk screws and pull straight outward on top plate.
11. Remove screws located on the inside top of the window frame.
12. Remove screws from bottom window frame (this releases wall).
13. Grasp wall at gas fill mid lower wall and pull down as you are pulling the bottom of wall outward slide toward front of van until released from behind speaker panel. Remove wall out through rear cargo doors.

Wall, Passenger

1. Slide passenger center seat all the way forward or remove if it has the removable seat option.
2. Remove rear speaker.
3. Remove rear cabinet.
4. Remove DC outlet (refer to DC outlet removal procedure).
5. Place sofa in the flat position. Remove Sofa switch.
6. At the Side cargo rear door, peel back wall fabric at edges this exposes hidden screws, remove all screws.
7. Remove windowsill top plate. Remove 2 screws that are now exposed in windowsill.
8. Remove valance, see procedure.
9. Untuck at side cargo post, exposing screws, remove screws.
10. Grasp front of wall and pull out until rear releases from behind the rear speaker panel.
11. Tilt top inward and lower over the sofa.
12. Remove through rear cargo doors.

Window Ring Driver Side

1. Remove bottom windowsill.
2. Remove valance per procedures.
3. Repeat the above procedure for the 2nd vista bay window.

☛ Note

It is critical that the wall is loose at both window-mounting points.

4. At driver door peel back fabric on wall, this will expose screws. Remove screws.
5. Remove driver front factory seat belt shroud.
6. Remove driver center seat belt retainer if removal is for the rear window.
7. Pull bottom of wall away from window ring.
8. Lift fabric off from bottom of ring exposing screws, remove screws.
9. Grasp ring and slide upward until top of ring comes out from behind wall at the top.
10. Grasp top and bottom of ring and bend inward toward center of van, pull outward the removal is complete.

☛ Note

Caution this ring in step 10 is made of wood and will break if bent to sharply.

Window Ring Passenger Side

1. Remove bottom windowsill.
2. Remove valance per procedures.
3. Remove screws from window frame which, were under windowsill.
4. Peel back fabric at cargo door edge of wall, this will expose screws, remove screws.
5. Pull bottom of wall away from window ring.
6. Lift fabric off from bottom of ring exposing screws, remove screws.
7. Grasp ring and slide forward until ring comes out from behind wall at the front.

Window, Vista Bay

☛ Note This is a two-person operation.

1. Remove cloth covered window ring (refer to window ring removal procedure) this will expose all metal window frame mounting screws.
2. Secure window to ensure it will not fall during the following removal step.
3. Remove all #8 x 3/4" screws around the perimeter of the metal window frame.
4. Grasp window at the top and bottom, pull outward and set down.

Torque Specifications

1. Captain's Chair to Slider ---------- 16-21 FT LB
2. Pedestal to Floor ---------- 22-30 FT LB
3. Removable Seat Plate to Floor ---------- 22-30 FT LB
4. Seatbelt Retractor to Bracket (Dodge SWB) ------ 6-8 FT LB
5. Seatbelt Retractor to Floor ---------- 22-30 FT LB
6. Seatbelt Retractor to Wall ---------- 22-30 FT LB
7. Slider to Pedestal ---------- 24-29 FT LB
8. Sofa to Floor ---------- 22-30 FT LB
9. Wheel ---------- 85 FT LB

LWB Full-Size Van Procedures

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1997/1998 Dodge LWB

Sport Top

Valance

1. Remove wood trim.
2. Untuck fabric at front of valance (driver side) and remove hidden screw.
3. Remove shades per procedure.
4. Remove screws located inside wood trim cutout which secures valance to headliner
5. Lower valance, disconnect harness and remove valance.

Carpet

1. Remove all seating.
2. Remove Engine cover.
3. Remove all door step plates.
4. Remove all window sill wood.
5. Remove 2 screws in window frame that were exposed after sill removal.
6. Remove deluxe wall (refer to procedure) if equipped.
7. Remove both rear storage cabinets installed in walls, if equipped.
8. Remove sofa control module per procedure.
9. Remove deluxe wall per procedure.
10. Remove Cellular phone box.
11. Remove jack and jack handle, remove jack base plate.
12. Remove all seat belt anchor bolts secured at floor.
13. Beginning at rear cargo doors grasp carpet and lift upward removing carpet from flooring, moving toward the front of the van roll carpet as it is freed. If you encounter difficulty with carpet that is wedged under the walls gently grasp the bottom of the wall and the window frame and pull outward. This will lift the wall away from the carpeting allowing you to pull it free (note carpet is stapled along the edges of the rear fender wells and will require extra effort to release. Ensure that all staples are removed prior to installing the new carpet.

Center Beam, Molded Plastic

1. Remove front and rear maps lights covers and remove screws from housing. Remove map lights.
2. Remove exposed screws.
3. Remove screws from center wood insert and remove insert.
4. Remove exposed screws from molded plastic center beam, lower center beam.
5. Disconnect electrical connector and remove center beam.
6. If vehicle is equipped with rear air unscrew the outer male from the inner female outlet.

Door Panel Passenger & Driver Front

1. Remove factory door handle.
2. Grasp insert on upper door panel and pull outward until retainers are free from door, disconnect electrical connector. Remove exposed screws.
3. Remove retainer screw from bottom front corner of door panel (exposed).
4. Grasp door panel at top edge and pull outward and pull upward to free.
5. Bottom door panel, grasp edges of panel and pull outward until retainers are free.

Cargo Doors Rear

1. Remove door handle bezel (2) screws, passenger side.
2. Grasp edge of door panel at top and pull outward until you feel retainers are free Continue this motion all around panel to complete process.

Cargo Door, Side, Front

1. Remove caps from pull handle by unsnapping.
2. Remove exposed screws, remove handle.
3. Remove screws from molded mag rack/ cup holder, if equipped.
4. Remove fold down cup holder screws, if equipped.
5. Remove factory door handle bezel.
6. Grasp edge of door panel at top and pull outward until retainers are free. Continue this motion all around panel to complete process.

Cargo Door, Side, Rear

1. Remove caps from pull handle by unsnapping.
2. Remove 4 exposed screws, remove handle.
3. Grasp edge of door panel at top and pull outward until retainers are free. Continue this motion all around panel to complete process.

Faceplates

Remove VCP Faceplate:

1. Remove VCP trim ring.
2. Remove faceplate screws and remove faceplate.

Remove Storage Box Faceplate:

3. Open storage compartment door and remove faceplate screws.
4. Remove faceplate.

Removal of TV Lower Trim Piece:

5. Remove TV Lower Trim Piece Screws.
6. Remove TV Lower Trim Piece.

Head Board

1. Remove 2 exposed screws from VCP trim ring, remove ring. (Exposes 2 screws in face plate remove).
2. Grasp faceplate and pull outward until mating edge along TV is clear, slide toward center of van to remove.
3. Open storage compartment door exposing 2 screws, remove.
4. Grasp frame and pull outward until mating edges along TV is clear, slide toward center of van to remove.
5. Remove 2 screws from strip under TV, remove strip (exposes TV mounting screws in L brackets (3) brackets one in the front, one on each side).
6. Remove screws from brackets.
7. Grasp TV and pull outward until connections are exposed.
8. Disconnect all connections, remove TV.
9. Remove VCP (refer to VCP removal procedure).
10. Remove 4 screws located in plywood backer 2 for each box (attaches boxes to backer) push boxes onto factory roof.
11. Remove map lights.
12. Remove switch plate.

☛ Note

Headboard and backer are loose at this point and will fall if not supported.

13. Remove 4 screws from bottom edge of faceplate backer.
14. Push top of faceplate toward front of van, allow to sit on storage and VCP boxes.
15. Pull rearward on headboard while tilting downward and remove.

Headliner

1. Lower sofa to the flat position.
2. Remove center beam (refer to procedure).
3. Remove headboard (refer to headboard removal procedure).
4. Remove valances (refer to procedure).
5. Remove Sport Top Wall (Refer to Upper Sport Top Wall removal procedure).
6. Remove rear box (refer to procedure).
7. Remove retaining screws remaining in headliner at center.
8. Slide headliner forward to clear rear roof, lower rear section, slide out through rear cargo doors.

Panel, Speaker, Rear

1. Remove rear storage cabinets in passenger sidewall, if equipped.
2. Using razor knife cut fabric along door edge, pull fabric loose to expose screws.
3. Remove screws.

Rear Box

1. Remove and disconnect speakers.
2. Remove 2 screws from rear storage box frame.
3. Remove 2 screws from storage box, push in box and allow to sit on rear roof.
4. Remove screws from each rear window valance wood trim.
5. Remove 3” retainer screws from inside of clothes hanger (1 at each end).
6. Remove screws from L brackets connecting box to roof.
7. Push forward and lower.
8. Remove box out through rear cargo doors.

Seat Belt, Center and Rear

1. Remove screws from valance wood trim, pull out and disconnect plug in connector.
2. Remove valance.
3. Remove wall.
4. Remove plastic seat belt insert from wall.
5. Remove 2 nuts from seat belt retainer

☛ (Critical items ensure when reinstalling seat belt that these 2 nuts are torqued to 6 to 8 foot lbs.).

6. Pull back seat belt boot located on floor which will expose seat belt anchor bolt, remove

☛ (Critical items ensure when reinstalling seat belt anchor bolt that it is torqued to 22 to 28 foot lbs.).

Seat Belt, Driver

1. Remove valance from Sport Top Wall (will expose tack screw).
2. Remove retaining bolt.

(Critical item seat belt mounting bolt must be torqued when reinstalling 22 to 30 foot pounds).

Seat Belt Sofa Lap

1. Peel back seat belt boot cover exposing mounting bolt, remove bolt.
2. Pull seat belt through elastic retaining loop in sofa remove.

☛ **(Critical item seat belt mounting bolt must be torqued when reinstalling 22 to 30 foot pounds)**

Shade Cargo Door, Side And Rear

1. Locate shade retainer clips behind shade and using thumb press down on bottom clip and pull out on shade until it releases from clip.
2. Grasp shade string at bottom where grommet enters into door shroud and pull outward until string grommet releases from hole, repeat procedure for other string.

Shade, Vista Bay Windows

1. Remove 3 screws attaching shade to top of window.
2. Remove screw from shade string tensioners located at bottom of window.

Shroud, Rear Cargo Doors

1. Remove window shade; refer to cargo door shade removal procedure.
2. Remove door panel; refer to door panel removal procedure.
3. Remove screws.
4. Remove screws from factory window latch.
5. Grasp shroud and pull outward to remove.

Shroud, Side Cargo Doors

1. Remove window shade; refer to cargo door shade removal procedure.
2. Remove door panel; refer to door panel removal procedure.
3. Remove screws.
4. Remove screws from factory window latch.
5. Remove door lock knob by unscrewing and pulling up.
6. Grasp shroud and pull outward to remove.

Sofa Motor

1. Remove sofa motor shroud.
2. Remove right side bolt from sofa frame attaching bracket to motor. (This releases bracket).
3. Remove 5/16" nuts from end of sofa motor on both sides.
4. Unplug power wires from control module.
5. Grasp and pull drive cable loose from motor.
6. Remove sofa motor.

Sofa Motor Control Module

1. Unplug 2 connectors from module
2. Remove screws from base

TV

1. Remove VCP Faceplate:
Remove VCP trim ring.
Remove faceplate screws and remove faceplate.
2. Remove Storage Box Faceplate:
Open storage compartment door and remove faceplate screws.
Remove faceplate.
3. Removal of TV Lower Trim Piece:
Remove TV Lower Trim Piece Screws.
Remove TV Lower Trim Piece.
4. Remove screws from TV brackets.
5. Grasp TV and pull outward until connections are exposed.
6. Disconnect all connections, remove TV.

VCP

1. Remove VCP Faceplate:
Remove VCP trim ring.
Remove faceplate screws and remove faceplate.
2. Remove screws from VCP brackets.
3. Grasp VCP and pull outward until connections are exposed.
4. Disconnect all connections, remove VCP.

Wall, Deluxe

1. Open smart block fuse door. Disconnect smart block harness from smart block. Re-position harnesses through cut out in compartment.
2. Remove hidden screws behind fuse block.
3. Remove screws from windowsill plate and remove.
4. Reach through opening in windowsill and disconnect connector from rear of CD player and/or rear radio (if equipped).
5. Grasp CD player/ rear radio and remove (if equipped).
6. Remove rear screw from top of deluxe-wall sill, untuck fabric from rear corner and remove hidden screw.
7. Untuck fabric at front of deluxe wall and remove hidden screw under fabric,

☛ (Untuck fabric by placing putty knife under edge and prying gently out, grasp fabric to expose screw).

8. Lift straight up on deluxe-wall approximately 2” to release from cleat. Continue lifting upward and remove.

Wall, Driver

1. Remove 6 exterior screws from upper wall wood trim, pull straight back and disconnect wires.
2. Remove sheer (3 screws at top) lower sheer down and rest on window ledge.
3. Remove screw from seat belt pod tab.
4. Remove 3 upper interior screws from top of Sport Top Wall through opening created with removal of valance trim.
5. Remove 2 tack screws from bottom of Sport Top Wall.

Wall, Passenger

1. Remove 4 exterior screws from Upper wall wood trim, pull straight back and disconnect wires.
2. Remove shade (3 screws at top) lower shade down and rest on window ledge.
3. Remove screw from center seat belt pod tab.
4. Remove 2 upper interior screws from top of Sport Top Wall through opening created with removal of valance.
5. Remove rear seat belt pod (1 hidden screw located 1" down from top under fabric at center) remove 1 screw from pod tab remove pod.
6. Remove 2 tack screws from bottom of Sport Top Wall, located in top of window frame.
7. Remove Sport Top Wall by sliding rearward until it comes out from under center pod, now pull straight back to yourself.

Wall, Upper Sport Top, Driver Side

1. Remove applicable valance wood.
2. Remove storage box by removing external screws, grasp and pull up and out.
3. Remove 4 screws from bottom edge under valance.
4. Remove rear box per procedure.
5. Remove upper Wall wood trim.
6. Tilt bottom outward to access 5-L brackets, remove screws from brackets (located at top of Sport Top Wall. These attach the Sport Top Wall to headliner).

Wall, Upper Sport Top, Passenger Side

1. Remove applicable valance wood.
2. Remove storage box by removing external screws, grasp and pull up and out.
3. Remove 4 screws from bottom edge under valance.
4. Remove rear box per procedure.
5. Remove Upper Wall wood trim.
6. Tilt bottom outward to access 5L brackets, remove rear box screws from brackets (located at top of Sport Top Wall. These attach the Sport Top Wall to the headliner.)

Window Ring Removal Driver Side

1. Remove bottom windowsill.
2. Remove valance per procedures.
3. Repeat the above procedure for the 2nd vista bay window.

Note

It is critical that the wall is loose at both window-mounting points.

4. At driver door peel back fabric on wall, this will expose screws. Remove screws.
5. Remove driver front factory seat belt shroud.
6. Remove driver center seat belt retainer if removal is for the rear window.
7. Pull bottom of wall away from window ring.

8. Lift fabric off from bottom of ring exposing screws, remove screws. Slide ring around to expose all screws in window retainer clamp.
9. Grasp ring and slide upward until top of ring comes out from behind wall at the top.
10. Grasp top and bottom of ring and bend inward toward center of van, pull outward the removal is complete.

Note

Caution this ring in step 10 is made of wood and will break if bent to sharply.

Window Ring Removal Passenger Side

1. Remove bottom windowsill.
2. Remove valance per procedures.
3. Remove screws from window frame which, were under windowsill.
4. Peel back fabric at cargo door edge of wall, this will expose screws, remove screws. Slide ring around to expose screws in window retainer clamp.
5. Pull bottom of wall away from window ring.
6. Lift fabric off from bottom of ring exposing screws, remove screws.
7. Grasp ring and slide forward until ring comes out from behind wall at the front.

Note

Caution this ring in step 13 is made of wood and will break if bent to sharply.

Window, Vista Bay

Note

This is a two-person operation.

1. Loosen cloth covered window ring (refer to window ring removal procedure step 8) this will expose all metal window frame mounting screws.
2. Secure window to ensure it will not fall during the following removal step.
3. Remove all #8 x 3/4" screws around the perimeter of the metal window frame.
4. Grasp window at the top and bottom, pull outward and set down.

Torque Specifications

1. Captain's Chair to Slide ---------- 16-21 FT LB
2. Pedestal to Floor ---------- 22-30 FT LB
3. Removable Seat Plate to Floor ---------- 22-30 FT LB
4. Slider to Pedestal ---------- 24-29 FT LB
5. Sofa to Floor ---------- 22-30 FT LB
6. Seatbelt Retractor to Floor ---------- 22-30 FT LB
7. Seatbelt Retractor to Bracket (Dodge SWB) ------ 6-8 FT LB
8. Seatbelt Retractor to Wall ---------- 22-30 FT LB
9. Wheel ---------- 85 FT LB

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Low Top

Carpet

1. Remove all seating.
2. Remove jack and jack handle, remove jack base plate 4 screws.
3. Remove all door step plates.
4. Remove all seat belt anchor bolts secured at floor (refer to seat belt removal procedure).
5. Remove screws holding the bottom of the window shrouds.
6. Remove shade string grommets.
7. Remove TV Console per procedure, if equipped.
8. Remove engine cover by removing the screws located in the upper storage compartment and the clips located on the sides of the engine cover.
9. Beginning at rear cargo doors grasp carpet and lift upward removing carpet from flooring, moving toward the front of the van roll carpet as it is freed. If you encounter difficulty with carpet that is wedged under the walls gently grasp the bottom of the wall and the window frame and pull outward. This will lift the wall away from the carpeting allowing you to pull it free. *Note carpet is stapled along the edges of the rear fender wells and will require extra effort to release. Ensure that all staples are removed prior to installing the new carpet.

Center Light Beam

1. Remove exposed screws.
2. Disconnect electrical connector and remove center beam.

Door Panel, Passenger & Driver Front

1. Remove factory armrest assembly and power window and door lock assembly.
2. Remove the retainer screw from the bottom front corner of door panel. (Exposed).
3. Remove retainer screw from bottom front corner of door panel (exposed).
4. Grasp top door panel inserts at top edge and pull outward to free.
5. Remove exposed screw.
6. Bottom door panel, grasp edges of panel and pull outward until retainers are free.

Door Panel, Rear Cargo Doors

1. Remove door handle bezel (2) screws, (passenger side).
2. Grasp edge of door panel at top and pull outward until you feel retainers snap out from its retainer. Continue this motion all around panel to complete process.

Door Panel, Side Cargo Door, Front

1. Remove caps from pull handle by unsnapping.
2. Remove 4 exposed screws, remove handle.
3. Remove factory door handle bezel (2) screws.
4. Remove fold down cup holder (4) screws if equipped.
5. Grasp edge of door panel at top and pull outward until you feel retainers snap out from its retainer. Continue this motion all around panel to complete process.

Door Panel, Side Cargo Door, Rear

1. Remove caps from pull handle by unsnapping.
2. Remove 4 exposed screws, remove handle.
3. Remove 4 screws from frame around molded insert.
4. Grasp edge of door panel at top and pull outward until you feel retainers snap out from its retainer. Continue this motion all around panel to complete process.

Head Board

1. Remove map lights (2), unsnap cover this exposes 2 screws, remove. Pull down on light and disconnect wiring.
2. Drop the top of the Soffits by doing the following: Remove soffit wood trim (both sides). Untuck the fabric at the front and rear of the driver's side soffit and remove the exposed screw. Pull the top of the soffit to release the top from the j-rail. Remove the soffit over the passenger's side cargo doors by untucking the fabric at the front of the soffit and remove the exposed screw.
3. Remove buttons, remove exposed screws.
4. Reach through hole where map light was, grasp and pull straight back until headboard clips are free from factory lip in roof.
5. Tilt rear of headboard down and pull rearward until free.

Headliner

1. Remove headboard (per procedures).
2. Drop the top of the Soffits by doing the following: Remove Upper sport top wall wood trim (both sides). Untuck the fabric at the front and rear of the driver's side soffit and remove the exposed screw. Pull the top of the soffit to release the top from the j-rail. Remove the soffit over the passenger's side cargo doors by untucking the fabric at the front of the soffit and remove the exposed screw. Untuck the fabric on the front and rear of the rear soffit and remove the exposed screws. Pull at the top of the Soffits and let hang.
3. Remove screws from center light beam pull down unplug wires at lights
4. Remove rear map light located in headliner, unsnap cover exposes 2 screws, remove, pull down on light and disconnect plug in, remove screw that is under the fabric 1" to the front of the map light.
5. Remove 4 tack screws from headliner, located where center beam was.
6. Slide forward until rear cleats release from factory roof lip.
7. Lower down and remove through the rear doors.

Panel Speaker, Rear

1. Remove speakers.
2. Remove rear door gimp as required pulling fabric loose on speaker panel.
3. Remove all exposed screws and remove speaker panel.

Seat Belts, Mid Seats And Sofa

1. Drop the top of the Soffits by doing the following (left or right side): Remove soffit wood trim (either side). Untuck the fabric at the front and rear of the driver soffit and remove the exposed screw. Pull the top of the soffit to release the top from the j-rail. Remove the soffit over the passenger's side cargo doors by untucking the fabric at the front of the soffit and remove the exposed screw. Untuck the fabric on the front and rear of the rear soffit and remove the exposed screws. Pull at the top of the Soffits and let hang.
2. Remove seat belt bolt

☛ **(Critical items ensure when reinstalling seat belt that these 2 nuts are torqued to 6 to 8 foot lbs.).**

3. Pull back seat belt boot located on floor which will expose seat belt anchor bolt, remove

☛ **(Critical items ensure when reinstalling seat belt anchor bolt that it is torqued to 22 to 28 foot lbs.).**

Shade Removal

1. Remove screws attaching shade to top of window.
2. Remove shade string grommet located at bottom of window.

Shroud Cargo Doors, Rear Cargo Doors

1. Remove window shade; refer to shade removal procedure.
2. Remove screws.
3. Remove screws from factory window latch (ensure that you position your other hand inside the doorframe under the latch to catch the plate).
4. Grasp shroud and pull up and out to remove.

Shroud, Vista Bay Window

1. Remove shade, see procedure.
2. Remove screws attaching shroud to wall.

Shroud Cargo Doors, Side Cargo Doors

1. Remove window shade; refer to shade removal procedure.
2. Remove screws.
3. Remove screws from factory window latch (ensure that you position your other hand inside the doorframe under the latch to catch the plate).
4. Remove door lock knob by unscrewing and pulling up.
5. Grasp shroud and pull up and out to remove.

Soffit, Passenger Side, Front

1. Remove Map Light cover and remove exposed screws. Lower light, disconnect harness.
2. Untuck the fabric at the front of the soffit to expose the hidden screw. Remove screw.
3. Pull the top of the soffit to release the top from the J-channel.
4. Remove the exposed screws.

Soffit, Passenger Side, Rear

1. Remove the shade (see procedure).
2. Remove the exposed screws.
3. Remove Map Light cover and remove exposed screws. Lower light, disconnect harness
4. Untuck the fabric at the front and rear of the soffit to expose the hidden screws. Remove the screws.
5. Pull the top of the soffit to release the soffit from the J-channel.
6. Remove the seat belt retainer bolt and thread the seat belt through the seat belt cutout. Remove the exposed screws.

Soffit, Driver Side

1. Remove shade (see procedure).
2. Remove the exposed screws.
3. Remove the Map lights cover and remove exposed screws. Lower light and disconnect.
4. Untuck the fabric at the front of the soffit to expose the hidden screw. Remove screw.
5. Pull the top of the soffit to release the top from the J-channel.
6. Remove the seat belt retainer bolt and thread the seat belt through the seat belt cutout.
7. Remove the exposed screws.

TV Console

1. Grasp edges of TV, pull out and disconnect.
2. Grasp edges of VCP, lift out and disconnect.
3. Remove screws connecting L-bracket to floor and remove TV console.

Wall, Driver Side

1. Remove the mid seat.
2. Remove the sofa.
3. Peel back wall fabric from driver doorpost and expose-hidden screws, remove all screws.
4. Remove shrouds driver side front and rear, (Refer to shroud removal procedure).
5. Remove Driver side soffit. (See soffit procedure).
6. Grasp wall at gas fill mid lower wall and pull down as you are pulling the bottom of wall outward slide toward front of van until released from behind speaker panel.
7. Remove wall out through rear cargo doors.

Wall, Passenger

1. Push the mid seat forward.
2. Lay the sofa in the flat position.
3. Peel back wall fabric from cargo doorpost and expose-hidden screws, remove all screws.
4. Remove window shroud (Refer to shroud removal procedure).
5. Remove side soffit. (See soffit procedure).
6. Grasp wall at gas fill mid lower wall and pull down as you are pulling the bottom of wall outward slide toward front of van until released from behind speaker panel.
7. Remove wall out through rear cargo doors.

Window, Vista Bay

☛ Note

This is a 2-person operation

1. Remove window shroud (per procedures).
2. Remove all screws around the perimeter of the metal window frame.
3. Exit vehicle and go to outside of window and grasp at the top and bottom, pull outward and set down.

Torque Specifications

1. Captain's Chair to Slide ---------- 16-21 FT LB
2. Pedestal to Floor ---------- 22-30 FT LB
3. Removable Seat Plate to Floor ---------- 22-30 FT LB
4. Slider to Pedestal ---------- 24-29 FT LB
5. Sofa to Floor ---------- 22-30 FT LB
6. Seatbelt Retractor to Floor ---------- 22-30 FT LB
7. Seatbelt Retractor to Bracket (Dodge SWB) ------ 6-8 FT LB
8. Seatbelt Retractor to Wall ---------- 22-30 FT LB
9. Wheel ---------- 85 FT LB

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1997/1998 Dodge SWB

Sport Top

Carpet

1. Remove all seating.
2. Remove jack and jack handle, remove jack base plate 4 screws.
3. Remove all door step plates.
4. Remove all seat belt anchor bolts secured at floor (refer to seat belt removal procedure).
5. Remove lower window shrouds screws.
6. Remove shade string grommets.
7. Remove engine cover by removing the screws located in the upper storage compartment and the clips located on the sides of the engine cover.
8. Beginning at rear cargo doors grasp carpet and lift upward removing carpet from flooring, moving toward the front of the van roll carpet as it is freed. If you encounter difficulty with carpet that is wedged under the walls gently grasp the bottom of the wall and the window frame and pull outward. This will lift the wall away from the carpeting allowing you to pull it free. Note carpet is stapled along the edges of the rear fender wells and will require extra effort to release. Ensure that all staples are removed prior to installing the new carpet.

Center Light Beam

1. Remove exposed screws.
2. Disconnect electrical connector and remove center beam.

Door Panel, Passenger & Driver Front

1. Remove factory armrest assembly and power window and door lock assembly.
2. Remove the retainer screw from the bottom front corner of door panel (exposed).
3. Grasp top door panel inserts at top edge and pull outward to free.
4. Remove screws exposed after performing step 3.
5. Bottom door panel, grasp edges of panel and pull outward until retainers are free.

Door Panel, Rear Cargo Doors

1. Remove door handle bezel (2) screws, (passenger side).
2. Grasp edge of door panel at top and pull outward until you feel retainers snap out from its retainer. Continue this motion all around panel to complete process.

Door Panel, Side Cargo Door, Front

1. Remove caps from pull handle by unsnapping.
2. Remove 4 exposed screws, remove handle.
3. Remove factory door handle bezel (2) screws.
4. Remove fold down cup holder (4) screws if equipped.
5. Grasp edge of door panel at top and pull outward until you feel retainers snap out from its retainer. Continue this motion all around panel to complete process.

Door Panel, Side Cargo Door, Rear

1. Remove caps from pull handle by unsnapping.
2. Remove 4 exposed screws, remove handle.
3. Remove 4 screws from frame around molded insert.
4. Grasp edge of door panel at top and pull outward until you feel retainers snap out from its retainer. Continue this motion all around panel to complete process.

Face Plate

1. Remove TV (see procedure).
2. Remove VCP (see procedure).
3. Remove screws from bottom of faceplate.
4. Expose hidden screw on the front of Soffits by untucking fabric to expose screw, remove screw.
5. Remove upper sport top wall wood trim, both sides.
6. Gently pull at the top of the soffit to remove soffit from J-channel (both sides).
7. Remove screw-connecting headboard to faceplate (both sides), exposed when soffit is lowered.
8. Remove exposed screws in 2-L brackets connecting faceplate to upper wall (both sides). Lower faceplate.

Head Board

1. Remove Faceplate (see procedure).
2. Remove Map light covers and remove the exposed screws. Lower light and disconnect harness.
3. Remove buttons and then exposed screws. Pull towards rear to release, and remove from vehicle.

Headliner

1. Remove faceplate (see procedure).
2. Remove rear box (refer to procedure).
3. Remove Upper Sport Top Walls (see procedure).
4. Remove center beam by removing 6 screws and disconnecting wire connector.
5. Remove retaining screws remaining in headliner at center.
6. Slide headliner forward to clear rear roof, lower rear section, slide out through rear cargo doors.

Panel Speaker, Rear

1. Remove speakers.
2. Remove door gimps as required and pull fabric loose at each edge of the doors to expose screws.
3. Remove all exposed screws and remove speaker panel.

Rear Box

1. Expose hidden screw on the front of Soffits by untucking fabric to expose screw, remove screw.
2. Remove upper sport top wall wood trim, both sides.
3. Gently pull at the top of the soffit to remove soffit from J-channel (both sides) and let soffit suspend. Remove grab handles.
4. Reach in and remove screws, in L-bracket, which connects rear box to the roof.
5. Remove box out through rear cargo doors.

Seat Belts, Mid Seats And Sofa

1. Drop the top of the Soffits by doing the following (left or right side): Remove Upper sport top wall wood trim (either side). Untuck the fabric at the front and rear of the driver's side soffit and remove the exposed screw. Pull the top of the soffit to release the top from the j-rail. Remove the soffit over the passenger's side cargo doors by untucking the fabric at the front of the soffit and remove the exposed screw. Untuck the fabric on the front and rear of the rear soffit and remove the exposed screws. Pull at the top of the Soffits and let hang.
2. Remove upper seat belt bolt(s).

☛ **(Critical item ensures when reinstalling seat belt that these 2 nuts are torqued to 6 to 8 foot lbs.).**

3. Pull back seat belt boot located on floor which will expose seat belt anchor bolt, remove

☛ **(Critical items ensure when reinstalling seat belt anchor bolt that it is torqued to 22 to 28 foot lbs.).**

Shade Removal, Vista Bay Windows

1. Remove 3 screws attaching shade to top of window.
2. Remove shade string grommet located at bottom of window.

Shroud, Rear Cargo Doors

1. Remove shroud screws.
2. Remove screws from factory window latch (ensure that you position your other hand inside the doorframe under the latch to catch the plate).
3. Grasp shroud and pull outward to remove.

Shroud, Side Cargo Doors

1. Remove window shade; refer to shade removal procedure.
2. Remove exposed screws.
3. Remove 3 screws from factory window latch (ensure that you position your other hand inside the doorframe under the latch to catch the plate).
4. Remove door lock knob by unscrewing and pulling up.
5. Grasp shroud and pull outward to remove.

Shroud, Vista Bay

1. Remove shades from vista bay window, per procedure.
2. Remove window shroud screws, remove shroud.

Soffit, Passenger, Front

1. Remove shade per procedure.
2. Remove Map light cover and remove the exposed screws. Lower light and disconnect harness.
3. Expose hidden screw on the front of soffit by untucking fabric to expose screw, remove screw.
4. Remove upper sport top wall wood trim screws. Lower wood trim.
5. Gently pull at the top of the soffit to remove soffit from J-channel.
6. Remove all exposed screws.

Soffit, Passenger, Rear

1. Remove window shades per procedures.
2. Remove front soffit.
3. Remove Map light cover and remove exposed screws. Lower light and disconnect harness.
4. Expose hidden screw on the front and rear of soffit by untucking fabric to expose screw, remove screw.
5. Remove upper sport top wall wood trim.
6. Gently pull at the top of the soffit to remove soffit from J-channel.
7. Remove all exposed screws and lower soffit.

Soffit, Driver

1. Remove Map light covers and remove exposed screws. Lower light and disconnect harness.
2. Expose hidden screw on the front and rear of soffit by untucking fabric to expose screw, remove screw.
3. Remove upper sport top wall wood trim.
4. Gently pull at the top of the soffit to remove soffit from J-channel.
5. Remove window shades.
6. Remove all exposed screws and lower soffit.

TV

1. Remove 4 exposed screws from TV trim ring, remove ring. (Exposes screws in L-brackets remove screws).
2. Grasp TV and pull outward until connections are exposed.
3. Disconnect all connections, remove TV.

VCP

1. Remove TV (per procedures).
2. Remove VCP box from press fasteners.
3. Remove VCP box through TV opening.
4. Remove VCP from VCP box.
5. Disconnect Electrical connector.

Wall, Driver Side

1. Remove the remote storage from wall, if applicable.
2. Remove Drivers soffit (per procedures).
3. Remove shrouds and shades.
4. Remove mid seat.
5. Remove sofa.
6. Untuck fabric at driver's doorpost and remove screws.
7. Grab wall at the bottom and tilt out ward. Remove wall.

Wall, Passenger Side

1. Remove Passenger rear soffit (per procedures).
2. Remove shroud.
3. Push the mid seat forward. Remove sofa.
4. Untuck fabric at side cargo door post and remove screws.
5. Expose screws at rear cargo doorpost and remove.
6. Grab wall at the bottom and tilt out ward. Remove wall.

Wall, Sport Top, Upper

1. Remove soffit (refer to soffit removal procedure).
2. Remove rear box.
3. Tilt bottom outward to access L brackets, remove screws from brackets.
4. Support and lower upper sport top wall.

Window, Vista Bay

☛ Note

This is a 2-person operation.

1. Remove window shroud (per procedures).
2. Remove all screws around the perimeter of the metal window frame.
3. Exit vehicle and go to outside of window and grasp at the top and bottom, pull outward and set down.

Torque Specifications

1. Captain's Chair to Slider ----------16-21 FT LB
2. Pedestal to Floor----------22-30 FT LB
3. Removable Seat Plate to Floor----------22-30 FT LB
4. Slider to Pedestal----------24-29 FT LB
5. Sofa to Floor----------22-30 FT LB
6. Seatbelt Retractor to Floor----------22-30 FT LB
7. Seatbelt Retractor to Bracket (Dodge SWB) ----------6-8 FT LB
8. Seatbelt Retractor to Wall ----------22-30 FT LB
9. Wheel (van and pickup single axle) ----------85 FT LB

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1997/1998 Dodge/ Plymouth

Caravan / Voyager

Center Beam

1. Remove 6 screws from beam.
2. Lower down.
3. Disconnect mate-n-lock for reading lights (2 sets).
4. Disconnect wiring for indirect light 2 wires.

CD

1. Remove faceplate (refer to faceplate removal procedure).
2. Remove screws from top of CD attaching it to backer.
3. Disconnect plug in connector.

Cooler

1. Remove lid.
2. Lift cooler out of frame.
3. Remove screws from exposed brackets.
4. Lift frame, up and out.

Note

When reinstalling cooler use care not to run screws into factory wiring harness located under carpeting and silicone must be placed around drain tube.

Faceplate

1. Remove the face of the radio or remove the radio trim and then the radio, as applicable.
2. Remove the radio by inserting the key (provided with the vehicle upon delivery) and twisting clockwise. This releases the lock. Pull radio out to remove.
3. Remove 6 screws from faceplate bottom strip.
4. Remove 2 screws from faceplate.
5. Grasp faceplate at bottom edge and pull outward tilting past the CD player, Rear radio and VCP (use caution not to tear the fabric on the canoes when performing this procedure).
6. Pull downward at this time releasing faceplate.

Game Ready

1. Unsnap bezel.
2. Remove screws.
3. Pull straight out.
4. Disconnect wiring.

Headphone Station

1. Unsnap bezel.
2. Remove 4 screws.
3. Pull straight out.
4. Disconnect mate-n-lock connector.

Headliner

1. Remove faceplate (refer to faceplate removal procedure).
2. Remove both Sport Top Walls (refer to Wall, Sport Top removal procedure).
3. Remove rear box (refer to rear box removal procedure).
4. Remove center light beam (refer to Center Beam removal procedure) exposes hidden screws.
5. Remove screws from headliner.
6. Lower rear of headliner slide to the rear and out.

Indirect Lighting, Sport Top Wall

1. Remove Game ready, if equipped.
2. Remove 4 external screws from frame.
3. Pull straight outward.
4. Disconnect 2 wires from rear.

Rear Radio

1. Remove radio face.
2. Remove the radio by inserting the key (provided with the vehicle upon delivery) and twisting clockwise. This releases the lock. Pull radio out to remove.
3. Pull straight out.
4. Disconnect mate-n- lock connector.

TV Speakers

1. Remove 4 screws.
2. Pull straight out.
3. Disconnect 2 speaker wires.

Speaker Box, Rear

1. Remove passenger or drivers Sport Top Wall (refer to Wall, Sport Top removal procedure).
2. Remove trim wood & TV speakers (refer to TV speaker removal procedure).
3. Remove screws from rear cargo door shroud (covers rear of headliner) pull downward to release factory clips.
4. Remove retainer clip exposed after removal of shroud (located approximately center of the headliner).
5. Reach through speaker hole cutout and remove screw in L bracket going into driver and passenger side Wall, Sport Top. Repeat for other side.
6. Remove screws from 2-L brackets located above the trim wood cutout.
7. Slide box forward to release and lower down. Remove out through rear door.

TV

1. Remove faceplate (refer to faceplate removal procedure) this will expose 2 L brackets for TV.
2. Remove screws from brackets, pull straight back and out.
3. Disconnect all wiring.

VCP

1. Remove faceplate (refer to faceplate removal procedure) this will expose 2 L brackets for VCP.
2. Remove screws from brackets, pull straight back and out.
3. Disconnect all wiring.

Wall, Sport Top

1. Remove faceplate (refer to faceplate removal procedure).
2. Grasp fabric located at top of driver or passenger sliding door rail and factory door gimp, pull downward until loose this will expose screws, remove screws.
3. Remove factory fan control switch on Sport Top Wall by removing 3 screws and disconnecting wires.
4. Remove clothes hanger.
5. Release top of “D” pillar shroud to loosen.
6. Remove screw from the appropriate side of the rear cargo door shroud (covers rear of headliner).
7. Remove valance lighting (and game ready if equipped) front and rear 4 screws in each, pull straight out and disconnect 2 wires.
8. Reach through cutout in Sport Top Wall and unplug connector to headphone station.
9. Remove the appropriate side speaker in rear box 4 screws.
10. Reach through speaker hole and remove 1 screw through L bracket in side of rear box attaching to upper wall.
11. Reach through valance lighting cutouts in Sport Top Wall and remove screws in L brackets attaching upper wall to roof wood strips (4 brackets).
12. Pull downward on front of Sport Top Wall until it is below the headboard.
13. Reach in and remove the a/c hoses from the vents.
14. Pull forward and out to remove Sport Top Wall from behind rear box.

Torque Specifications

1. Wheel---------- 85 FT LB

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Ram and Dakota Pickup Procedures

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Ram and Dakota Pickup

Dash Trim Wood Removal
(With Or Without Metal Fasteners)

Items Required:

1 inch rigid putty knife
Soft clean cloth
"Tape residue remover" Rubbing Alcohol
Screwdriver, Phillips, medium (screw on kit only)

Removal Procedure

☛ **Note**

Removal of a taped on unit is difficult due to the high adhesive strength of products used by our supplier. In most cases, items will be severely damaged by removal.

1. Remove all screws or fasteners (if applicable) to the dash kit item.
2. Try pulling the part off with your fingers. If part comes off, skip to step # 4.
3. If the part doesn't pull off, a 1" wide putty knife will help. Start under a corner and pry upward taking care not to damage vehicle surface. With perseverance and some putty knife scraping the part should start to pull off. Great care must be exercised when using the putty knife not to damage vehicle area under the part.
4. When the wood bulk of the piece has been removed there will be residue of tape and, or adhesive. Rubbing your thumb over the area forming a residue ball can clean off the residue. Additional rubbing will continue to remove residue. Adhesive remover can be used **it will not etch the surface of the dash area.** A non-destructive adhesive scraper can also be used. Once again, care must be exercised not to gouge the surface or mar the surrounding areas.

☛ **Note all adhesives must be removed from the surface if another unit is to be installed.**

5. Clean area with rubbing alcohol or other non-destructive solvent.

Dash Trim Wood
Installation Of Tape Backed
And Screw Fastened Items

Items Required:

- ☛ Screwdriver, Phillips size #0 Rubbing Alcohol
- ☛ Hair dryer, 2 speed or Heat gun, 2 speed Super Glue Gel (optional)
- ☛ 4298 3-M Adhesive Promoter Super Glue Gel Remover (Optional)
- ☛ Soft clean cloth
- ☛ #2 Pencil
- ☛ Gloss Black Paint Pen (Testor's Or Equivalent)

☛ Notes to Installation:

☛ Think through the installation to determine piece position.

☛ The item may show some packing mark(s) when removed from the package. **DO NOT BECOME ALARMED,** as they will disappear with the warm air in the vehicle.

All auto manufacturers apply silicon to various interior components to forestall cracking from cold and heat. The silicon base **must** be removed for tape backed product adherence.

In vehicle production, manufacturers allow different tolerances for various components. Though the make and model of any two vehicles may be the same, assembled component tolerance may vary. Vehicle components can often be moved/ adjusted if required to obtain a perfect fit.

If installation is to be over existing OEM wood dash, we recommended painting the already installed factory wood dash piece (s) prior to the new installation. Carefully mask area and paint a thin coat with a semi - gloss or flat lacquer black paint per manufacturer instruction.

☛ WARNING

IF HEAT SOURCE IS USED FOR INSTALLATION, DO NOT OVER HEAT. Over heating may cause cracking and the temperature should not exceed that which would be uncomfortable to facial skin (100 to 110 degrees f.) Heat should be applied to both the front and back surface of the item.

Never bend apiece back and fort as this will wrinkle finish.

Never try to bend a dash piece without heating it first - severe damage may occur.

Never attempt to bend hardboard product.

INSTALLATION PROCEDURE:

1. Dry mount part(s) to verify proper fit.

☛ Note

Perform the following step (Step #2)
Only if item requires bending and is not "hardboard".

2. Heat and shape the piece into the same contours as mounting area for dry fit. **DO NOT BEND BACK AND FORTH.**
3. Using a pencil, outline where the piece will fit. Doing this step will establish reference points for a perfect fit.
4. Place a clean cloth on your finger and work mounting area(s) clean with household rubbing alcohol. Clean only the mounting area(s). If a clear plastic piece must be cleaned, use Windex or a similar cleaner. Complete this step **twice** to ensure proper clean level.

5. **NOTE:** for additional adhesion a thin coat of 3-M 4298 may be applied to mounting area. Adhesive promoter seals the surface and increases adhesion. Promoter is generally used for critical areas such as bends where additional adhesion may be required or desirable. **WARNING, adhesive promoter may cause damage or discoloration to dash.** Care must be taken to avoid application of promoter to any surface, which will not be covered. Furthermore, this additional adhesion negates any movement of during installation.
6. Position yourself directly in front of part to be installed. To minimize the possibilities of misalignment remember (Step # 3) to dry fit each piece before installation. Watch for corner matches, alignment of critical thin sections, bends, etc. Remove the red plastic from the double backing tape. Heat the piece to be installed once again. Keeping your reference points in mind, work through each bend and bow, pushing it into place as you go. Work from one starting point.... **DO NOT STICK A TOP PIECE AND BOTTOM PIECE BEFORE THE MIDDLE PIECE, START AT THE TOP OR BOTTOM AND WORK ONE WAY.**
7. Operate switches , knobs, buttons., as applicable to ensure a proper installation fit. Should a problem result, lightly file the problem area and remark it. **BE CAREFUL NOT TO SLIP AND SCRATCH THE DASH.**
8. To remove fingerprints from installation, moisten a clean soft rag with the alcohol or Prep Sol and gently wipe wood surface. Erase the pencil lines previously drawn. We do not recommend using the same cleaning rag for this step.

☛ NOTE

The hair dryer (or heat source) may also be used after installation to remove any unnecessary bands or flaws.

☛ WARNING

DO NOT GET ANY VINYL DRESSING (e.g. ARMOR ALL) OR OTHER CHEMICALS ON OR BEHIND THE TAPE. THESE PRODUCTS WILL BREAK DOWN THE TAPE AND CAUSE FAILURE.

9. If any pieces should lift after installation, heat the part and carefully lift the edge that has loosened. Heat the piece again. Put a small drop of Super Glue Gel on a round toothpick and apply to the vehicle dash. Press the piece down firmly for several minutes.

METAL FASTENERS:

1. Screws are used in a variety of products and applications include items that are both taped and fastened with screws. Due to the extensive variety of materials, conditions and product conditions and construction methods, torque values are not established for screw on installations.

☛ NOTE

If item is combination screw and tape on, mount item as directed for tape on prior to installing screws.

2. Carefully locate and **pre-drill** all screw holes using 1/16 (.0625) dia, drill bit.

NOTE

Extreme care must be taken when installing screws to prevent slipping of the driver and damage to the finished surface to the product. If possible, position a thin hard plastic guard in area of screw hole to absorb a possible slipped driver point impact.

3. Drive screw with minimum required pressure to start. Continue to tighten screw until bottom of screw head contacts the material being installed. On counterbored screw holes, the screw head will be bottomed when the screw head is flush or slightly below surface. Once screw head has bottomed, back screw out (counter- clockwise) 1/4 of a turn. The slight back out of the screw is required to avoid damage to the material from overstress, fatigue and other possible influencing conditions as vibration.

Overhead Console, Dodge Ext. Cab

1. Remove the rear and front map lights by prying off the cover and removing the exposed screws. Disconnect the wires and remove the light.
2. Untuck the material in the front of the console and remove the exposed screws.
3. Remove the center screws holding the wood trim plate to the console.
4. Remove the exposed screws and lower the console.
5. Disconnect any remaining wires and remove.

Torque Specifications

1. Steptube Bars (pickup) ---------- 75 FT LB
2. Wheel (pickup single axle) ---------- 85 FT LB
3. Wheel, Aluminum (pickup dual axle) ---------- 140 FT LB

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16. TV Antenna ---------- 68
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20. VCP ---------- 69

Jeep Procedures

Air Compressor

1. Remove attachment screws.
2. Remove air compressor, disconnect wire harness.

CD Player

1. Remove rear storage box
2. Remove screws from CD mounting bracket and slide CD player from the back of the rear box.

Dash Trim Wood Removal (With Or Without Metal Fasteners)

Items Required:

1 inch rigid putty knife
Soft clean cloth
“Tape residue remover” Rubbing Alcohol
Screwdriver, Phillips, medium (screw on kit only)

Removal Procedure

☛ Note

Removal of a taped on unit is difficult due to the high adhesive strength of products used by our supplier. In most cases, items will be severely damaged by removal.

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5. Clean area with rubbing alcohol or other non-destructive solvent.

Dash Trim Wood
Installation Of Tape Backed
And Screw Fastened Items

Items Required:

Screwdriver, Phillips size #0 Rubbing Alcohol
Hair dryer, 2 speed or Heat gun, 2 speed Super Glue Gel (optional)
4298 3-M Adhesive Promoter Super Glue Gel Remover (Optional)
Soft clean cloth
#2 Pencil
Gloss Black Paint Pen (Testor's Or Equivalent)

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GPS (Telepath)

1. Remove Trim bezel.
2. Insert clips for removal at both sides of the GPS and pull out GPS unit.
3. Disconnect electrical connectors, remove unit.

Headliner

1. Remove GPS per GPS procedure.
2. Remove TV power switch, disconnect electrical connector.
3. Remove front overhead console, disconnect electrical connector.
4. Remove sun visors and clips, disconnect electrical connectors.
5. Pull CD remote from Velcro pad.
6. Remove pull handles.
7. Remove Game Ready, disconnect electrical connector.
8. Remove sunroof switch, disconnect electrical connector.
9. Remove rear sunroofs shroud; pull fabric back at all 4 corners and remove screws.
10. Remove headphone jacks, disconnect electrical connectors.
11. Remove rear sport top shroud and port holes.
12. Remove rear overhead console, disconnect electrical connector.
13. Remove rear speaker, disconnect electrical connector.
14. Remove all rear hatch shrouds, disconnect electrical connector.
15. Remove pillar shrouds; remove seat bolt shoulder bolts, pull seat bolt adjustment knob off, pull pillar shroud off post.
16. Remove TV, per procedures.
17. Disconnect CD remote through the TV mounting hole. Pull remote out from headliner.
18. Lower headliner and remove through rear hatch.

Rear storage box

1. Remove screws from top tray wood trim.
2. Remove screws from plastic tray. Lift tray off the rear box.
3. Remove air compressor, per procedures.
4. Remove screws from rear storage box to the floor.
5. Remove screw from box to the wall.
6. Slide rear box from wall and disconnect CD harness and VCP harness.

Roof rack

1. Remove the bolts from all roof rack arms.
2. Remove roof rack bolts from the sport top.
3. Remove roof rack from the sport top.

Sun roof (electric & manual)

1. Remove roof rack per procedures.
2. Remove headliner per procedures.
3. Remove screws from the sun roof rings. (Electric sunroof – disconnect motor harness from the main harness).
4. From inside the vehicle, push up on the sunroof, and hand to the outside man.

Note: When reinstalling sunroof reapply string sealant around the sunroof before installation. Sunroof MUST be in channel in roof lip. Replace any striped screws or the roof will leak.

TV

1. Remove screws from the TV wood base that mount through the headliner.
2. Pull TV away from the headliner and disconnect the wiring.

TV Base

1. Remove screws
2. Remove Base, hold TV in place.

TV Amp

Center Mount TV Amp

1. Remove TV per procedures.
2. Remove screws.
3. Lower and disconnect.

Left Mount TV Amp

1. Remove TV per procedures.
2. Remove screws.
3. Lower and disconnect.

TV Antenna

1. Remove headliner per procedure.
2. Remove tape.
3. Disconnect cables.

CD remote

1. Remove front overhead console per procedure.
2. Disconnect FM Modulator.
3. Remove remote from velcro and guide remote through opening.

FM Modulator

1. Remove headliner per procedures.
2. Remove screws.

Noise Choke

1. Remove headliner per procedures.
2. Remove screws.

Fuse Block

1. Lift bottom of left rear seat cushion.
2. Remove screws.

VCP

1. Remove rear storage box per procedures.
2. Remove screw from the VCP mounting brackets and slide VCP out from the back of the rear box.

Rear Tire Carrier

1. Remove wheel insert.
2. Remove spare tire.
3. Release latch, and open.
4. Remove screw in top of support rod.
5. Slide tire carrier up and off support rod.

Torque Specifications

1. Wheel ---------- 85 FT LB

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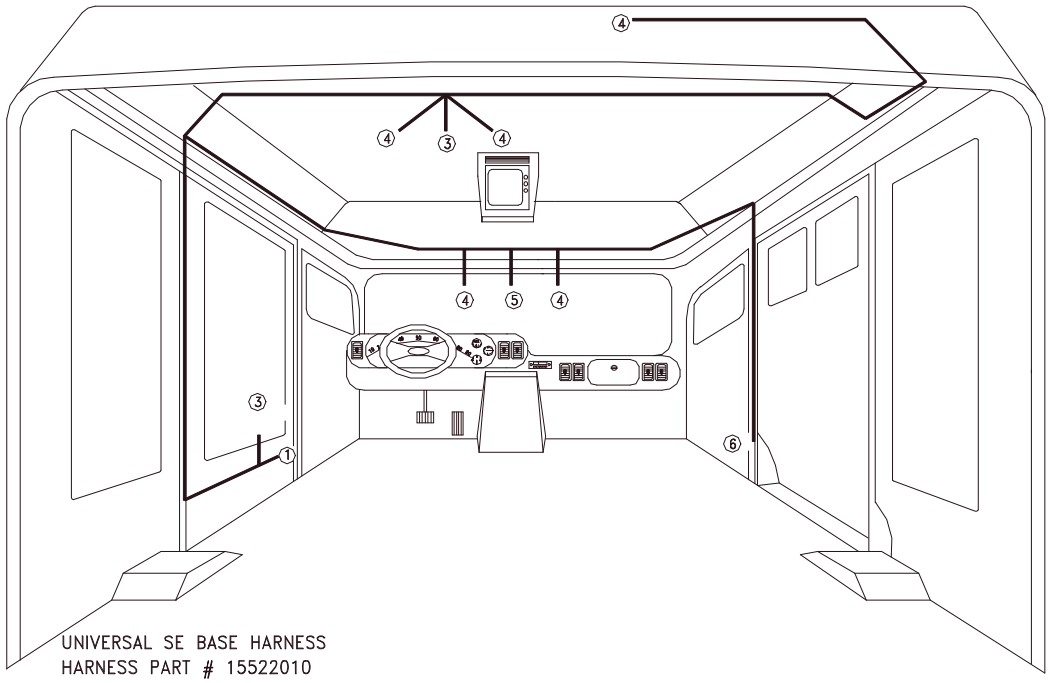
CHASIS MANUFACTURER:
FORD, GM, DODGE

MODEL YEAR:
1997

VEHICLE ELECTRICAL LAYOUT

VEHICLE TYPE:
FULL SIZE VAN

COMPLETED VEHICLE DESCRIPTION:
SE LOW/HIGH TOP



UNIVERSAL SE BASE HARNESS
HARNESS PART # 15522010

FINAL STAGE MANUFACTURER:
MARK III

CHASIS MANUFACTURER:
FORD, GM, DODGE

VEHICLE TYPE:
FULL SIZE VAN

MODEL YEAR:
1997

COMPLETED VEHICLE DESCRIPTION:
UNIVERSAL SE BASE HARNESS

CKT. #	CIRCUIT ITEMS	GUAGE	WIRE COLOR	POWER SOURCE	ACTUAL AMPS	FUSE SIZE
1	ELECTRONIC FUSE BLOCK			BATTERY/IGNITION		
2	TV/VCP TAP	18 TEW	PURPLE	IGNITION	--	7.5 AMP
3	INDIRECT LIGHT	18 TEW	BROWN	IGNITION (SWITCH PANEL)	0.24 AMP	10 AMP
4	UNITEC LIGHT	18 TEW	ORANGE, WHITE	IGNITION (SWITCH PANEL)/DOOR PIN	2.6 AMP	10/10 AMP
5	SWITCH PANEL	18 TEW	WHITE, BROWN, ORANGE	IGNITION	0.0 AMP	10/10 AMP
6	STEPWELL LIGHT	18 TEW	WHITE	DOOR PIN	0.26 AMP	10 AMP
					TOTAL	
					13.5 AMP	

SE BASE HARNESS

HARNESS PART #: 15522010

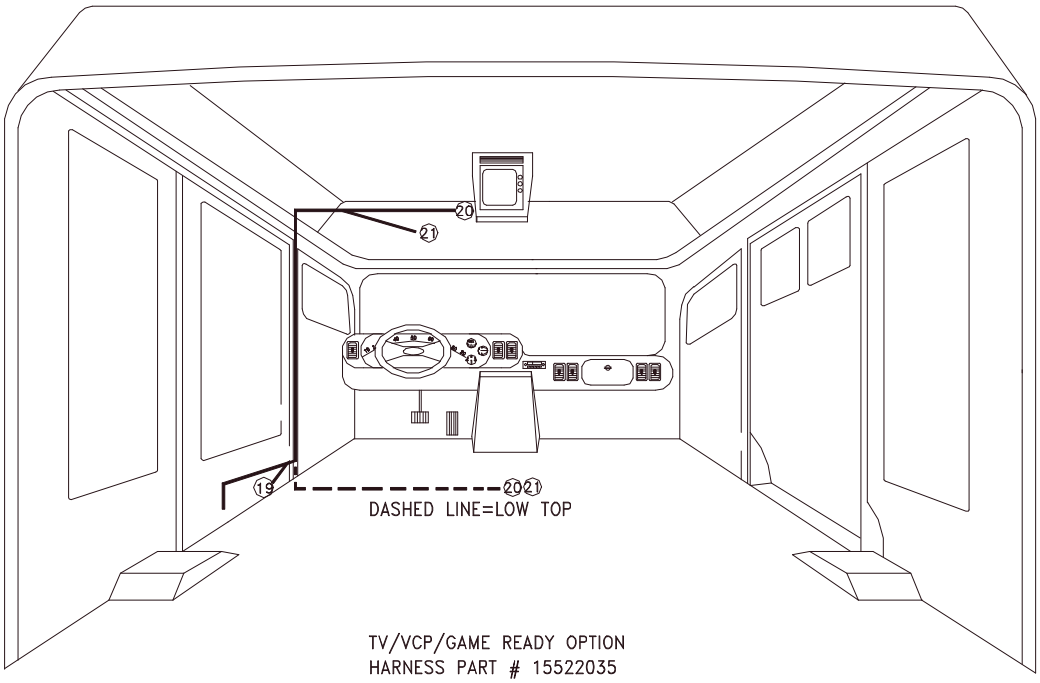
CHASIS MANUFACTURER: FORD, GM, DODGE

MODEL YEAR: 1997

VEHICLE ELECTRICAL LAYOUT

VEHICLE TYPE: FULL SIZE VAN

COMPLETED VEHICLE DESCRIPTION: SE LOW/HIGH TOP



TV/VCP/GAME READY OPTION
HARNESS PART # 15522035

FINAL STAGE MANUFACTURER: MARK III

CHASIS MANUFACTURER: **FORD, GM, DODGE**

VEHICLE TYPE: **FULL SIZE VAN**

MODEL YEAR: **1997**

COMPLETED VEHICLE DESCRIPTION:

CKT. #	CIRCUIT ITEMS	GUAGE	WIRE COLOR	POWER SOURCE	ACTUAL AMPS	FUSE SIZE
19	GAME READY	18 TEW	PURPLE, BLACK	IGNITION	.4 AMP	
20	TELEVISION	18 TEW	PURPLE, BLACK	IGNITION	2.95 AMP	
21	VCP	18 TEW	PURPLE, BLACK	IGNITION	1.0 AMP	
					TOTAL	
					4.35 AMP	7.5 AMP

SE TV/VCP OPTION

HARNESS PART #: 15522035

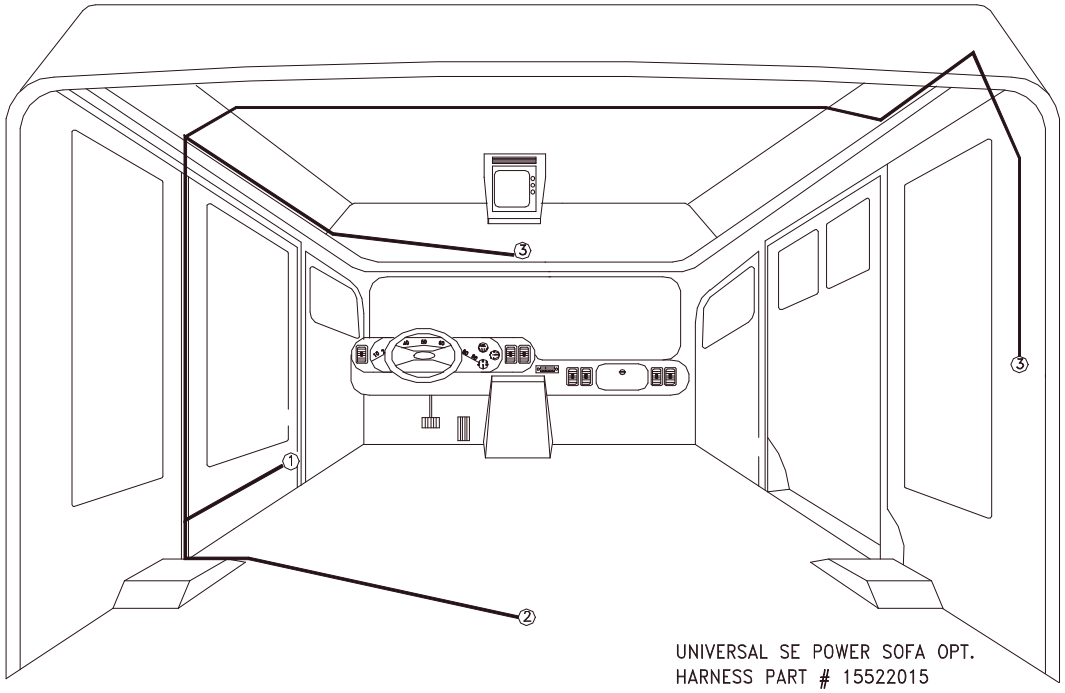
CHASIS MANUFACTURER:
FORD, GM, DODGE

MODEL YEAR:
1997

VEHICLE ELECTRICAL LAYOUT

VEHICLE TYPE:
FULL SIZE VAN

COMPLETED VEHICLE DESCRIPTION:
SE LOW/HIGH TOP



UNIVERSAL SE POWER SOFA OPT.
HARNESS PART # 15522015

FINAL STAGE MANUFACTURER:
MARK III

CHASIS MANUFACTURER:
FORD, GM, DODGE

VEHICLE TYPE:
FULL SIZE VAN

MODEL YEAR:
1997

COMPLETED VEHICLE DESCRIPTION:
SE LOW/HIGH TOP

CKT. #	CIRCUIT ITEMS	GUAGE	WIRE COLOR	POWER SOURCE	ACTUAL AMPS	FUSE SIZE
1	SOFA OPT. H-UP	12 TEW	RED/WHITE	AUTO-NET 110	--	
2	SOFA MOTOR	12,18 TEW	RED/WHITE,BLUE,BLACK	BATTERY	12.5 AMP	
3	SOFA SWITCH	18 TEW	BLUE, BLACK	ELEC SOFA CONTROLLER	0	
					TOTAL	
					12.5 AMP	20 AMP

SE POWER SOFA OPTION

HARNESS PART #: 15522015

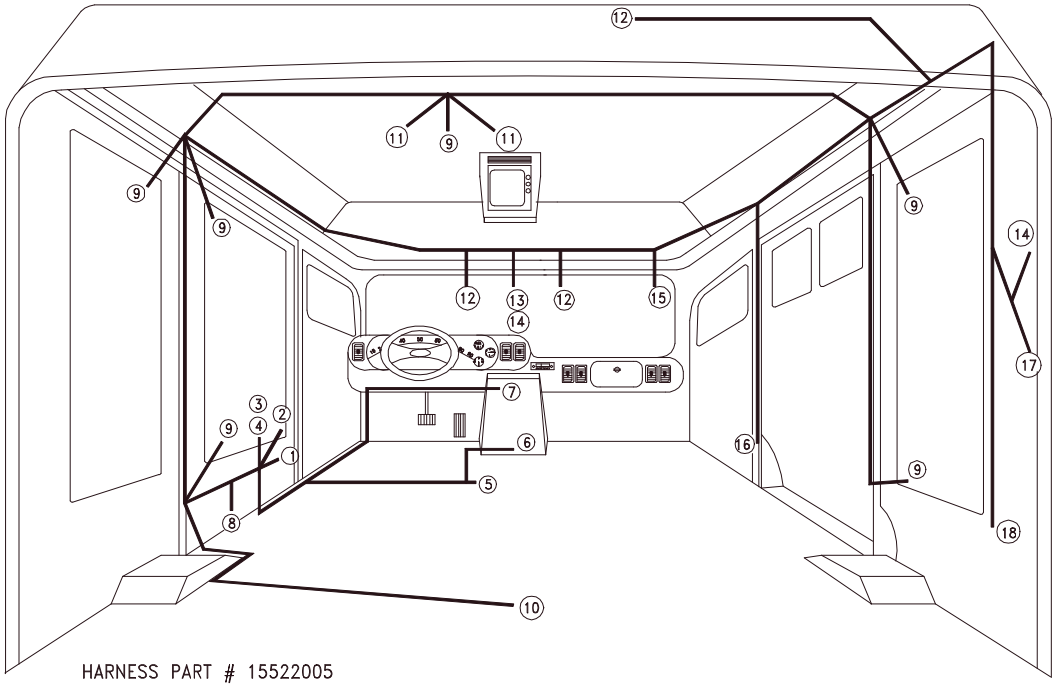
CHASIS MANUFACTURER: FORD, GM, DODGE

MODEL YEAR: 1997

VEHICLE ELECTRICAL LAYOUT

VEHICLE TYPE: FULL SIZE VAN

COMPLETED VEHICLE DESCRIPTION: UNIV. LE/LX BASE HARNESS



HARNESS PART # 15522005

FINAL STAGE MANUFACTURER: MARK III

CHASIS MANUFACTURER: **FORD, GM, DODGE**

VEHICLE TYPE: **FULL SIZE VAN**

MODEL YEAR: **1997**

COMPLETED VEHICLE DESCRIPTION: **UNIVERSAL LE/LX BASE HARNESS**

CKT. #	CIRCUIT ITEMS	GUAGE	WIRE COLOR	POWER SOURCE	ACTUAL AMPS	FUSE SIZE
1	ELECTRONIC FUSE BLOCK			BATTERY/IGNITION	--	
2	FLASHLIGHT	18 TEW	ORANGE	IGNITION	0.17 AMP	15 AMP
3	REAR RADIO TAP	18 TEW	ORANGE, RED	IGNITION/BATTERY	--	15/10 AMP
4	TV/VCP TAP	18 TEW	PURPLE	IGNITION	--	7.5 AMP
5	CELLULAR PHONE	18 TEW	RED	BATTERY	0.76 AMP	10 AMP
6	THERMOTRONIX	18 TEW	ORANGE	IGNITION	5.1 AMP	15 AMP
7	CD PLAYER	18 TEW	ORANGE, RED	IGNITION/BATTERY	3 AMP	15/10 AMP
8	SPEAKER CONTROL	18 TEW	PINK	IGNITION	--	
9	SILL LIGHT	18 TEW	BROWN	IGNITION (SWITCH PANEL)	0.24 AMP	7.5 AMP
10	SOFA	12 TEW	RED/WHITE, BLUE	BATTERY	12.5 AMP	20 AMP
11	CENTER UNITEC LIGHT	18 TEW	GREEN, WHITE	IGNITION (SWITCH PANEL), DOOR PIN	2.6 AMP	7.5/7.5 AMP
12	UNITEC LIGHT	18 TEW	ORANGE, WHITE	IGNITION (SWITCH PANEL), DOOR PIN	2.6 AMP	15/7.5 AMP
13	SWITCH PANEL	18 TEW	ORN/WHT, WHT/PUR, BLUE, PINK	IGNITION	0.14 AMP	1 AMP
14	SOFA SWITCH	18 TEW	BLUE	SOFA MOTOR SIGNAL	--	
15	VISOR LIGHT	18 TEW	ORANGE	IGNITION	0.33 AMP	15 AMP
16	STEPWELL LIGHT	18 TEW	WHITE	DOOR PIN	0.26 AMP	7.5 AMP
17	12 VOLT OUTLET	16 TEW	RED	BATTERY	8.1 AMP	10 AMP
18	12 VOLT OUTLET	16 TEW	RED	BATTERY	7.1 AMP	10 AMP
					TOTAL	
					51.66 AMP	

LE/LX BASE HARNESS

HARNESS PART # 15522005

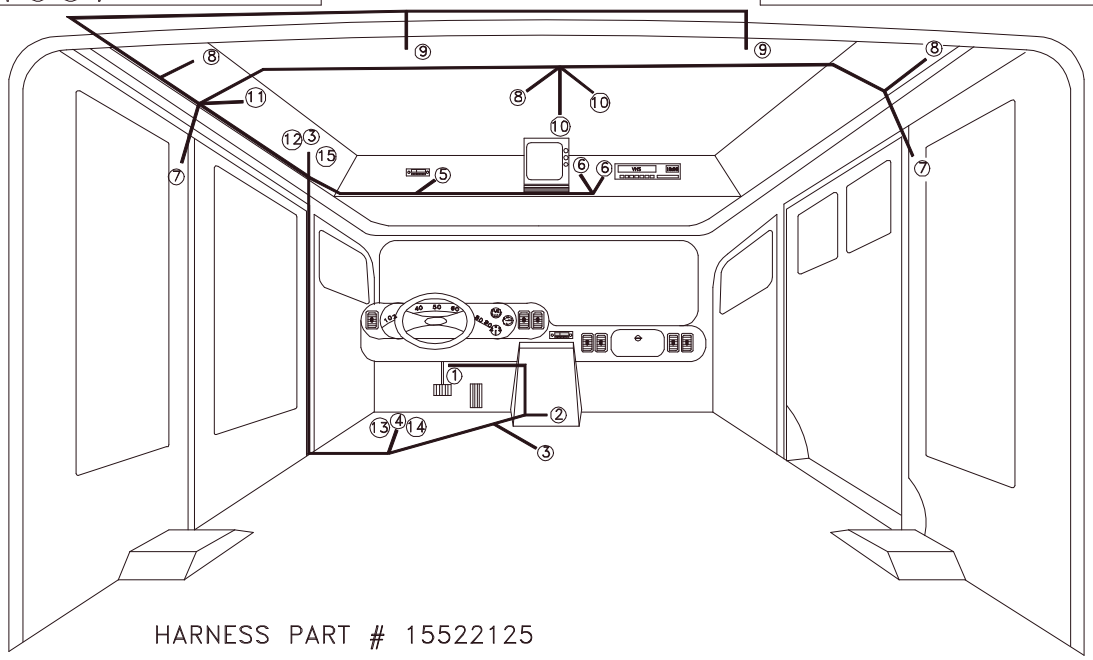
CHASIS MANUFACTURER:
DODGE

MODEL YEAR:
1997

VEHICLE ELECTRICAL LAYOUT

VEHICLE TYPE:
CARAVAN/VOYAGER

COMPLETED VEHICLE DESCRIPTION:
MINI VAN



HARNESS PART # 15522125

FINAL STAGE MANUFACTURER:
MARK III

CHASIS MANUFACTURER:
DODGE

VEHICLE TYPE:
CARAVAN/VOYAGER

MODEL YEAR:
1997

COMPLETED VEHICLE DESCRIPTION:
MINI VAN

CKT. #	CIRCUIT ITEMS	GUAGE	WIRE COLOR	POWER SOURCE	ACTUAL AMPS	FUSE SIZE
1	IGNITION SICNAL	18 TEW	YELLOW	IGNITION	-	
2	CONSOLE SWITCH	18 TEW	BRN,ORN,GRN,ORN/GRN,	IGNITION	.104 AMP	
			PUR,YEL/RED,BLACK			
3	CD PLAYER	18 TEW	ORANGE, RED	IGNITION & BATTERY	2 AMP	
4	BATTERY HOOK-UP	12 TEW	RED	BATTERY	-	
	FUSES	18 TEW	RED, ORANGE	IGNITION & BATTERY	-	7.5 BAT/15 IGN
5	REAR RADIO	18 TEW	RED, ORANGE, BLK/WHT	IGNITION & BATTERY	1.7 AMP	
			GRAY/RED, BLUE/YELLOW			
6	TV/VCP	18 TEW	PURPLE	IGNITION (SWITCHED)	3.2 AMP	
7	HEADPHONE STATION	18 TEW	GRY/RED, BLU/YEL,	REAR RADIO	-	
			YEL/RED, YEL/BLK, PINK			
8	INDIRECT LIGHT	18 TEW	BROWN, BLACK	IGNITION (SWITCHED)	.75 AMP	
9	TV XTERNAL SPEAKER	18 TEW	ORN/GRN, YEL/BLACK	TV (SWITCHED) SERIES	-	
10	UNITEC LIGHT	18 TEW	GREEN, WHITE, BLACK	IGNITION (SWITCHED), CTSY	1.5 AMP	
11	COURTESY HOOK-UP	18 TEW	WHITE	DOOR PIN	-	
12	GAME READY	18 TEW	PURPLE, BLACK	IGNITION (SWITCHED)	.4 AMP	
13	NOISE CHOKE	18 TEW	ORANGE, BLACK	IGNITION (SWITCHED)	SEE CKT.6&12	
14	HARNESS GROUND	14 TEW	BLACK	CHASIS GROUND	-	
15	RADIO/HEADPHONE GROUND	18 TEW	BLACK/WHITE, PINK	CHASIS GROUND	-	
				TOTAL		
					14.9 AMP	

BASE HARNESS

HARNESS PART #: 15522125

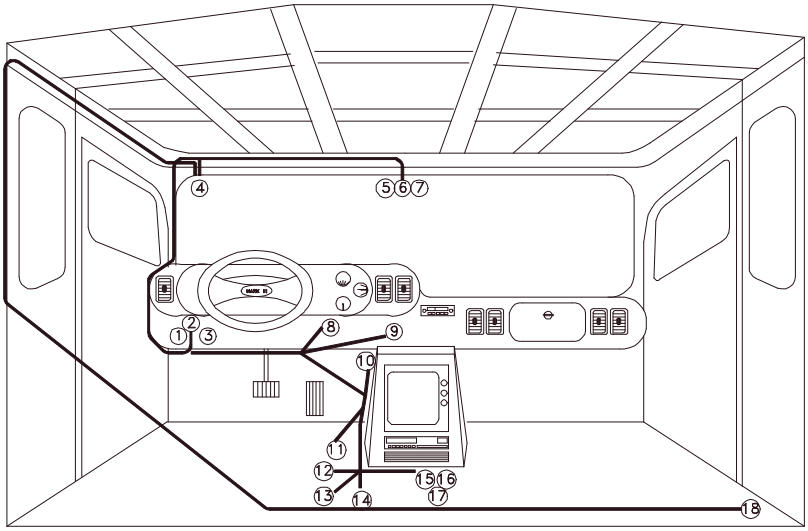
CHASIS MANUFACTURER:
FORD, GM, DODGE

MODEL YEAR:
1997

VEHICLE ELECTRICAL LAYOUT

VEHICLE TYPE:
PICK–UP

COMPLETED VEHICLE DESCRIPTION:



MODULAR PICK–UP HARNESS
PART #: 15521500
DUALLY PICK–UP PIGTAIL
PART #: 15521520

CREW CAB PICK–UP PIGTAIL
PART #: 15521521

REAR WINDOW SLIDER
PICK–UP PIGTAIL
PART #: 15521524

FINAL STAGE MANUFACTURER:
MARK III

CHASIS MANUFACTURER:
FORD, GM, DODGE

VEHICLE TYPE:
PICK-UP

MODEL YEAR:
1997

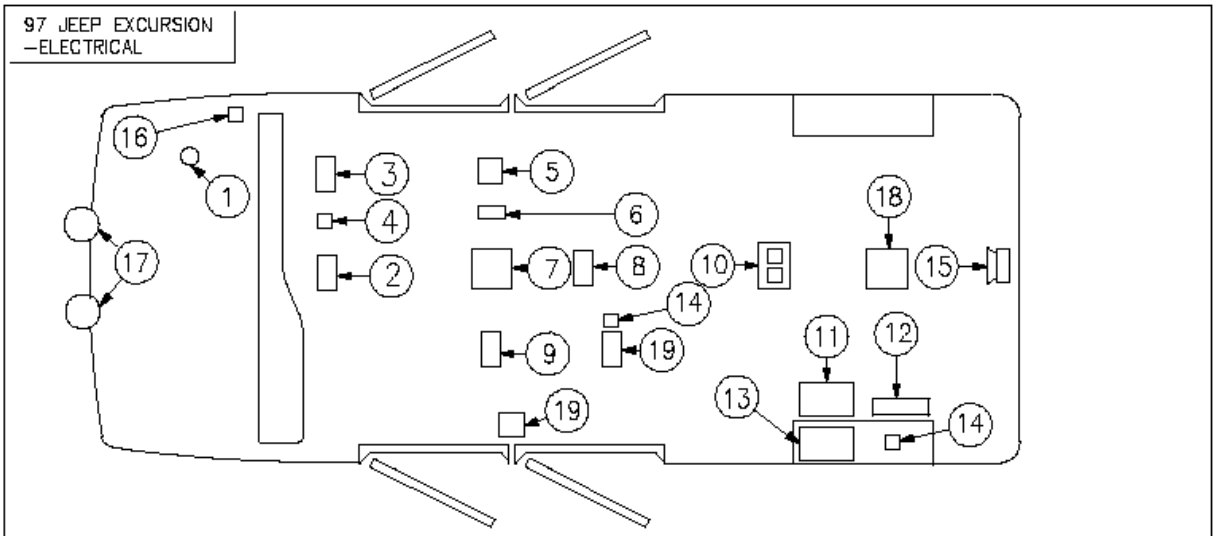
COMPLETED VEHICLE DESCRIPTION:

CKT. #	CIRCUIT ITEMS	GUAGE	WIRE COLOR	POWER SOURCE	ACTUAL AMPS	FUSE SIZE
1	POWER TAP/FUES BLOCK	18, 14 TEW	ORANGE, ORANGE/WHITE,	IGNITION & BATTERY	--	7.5, 30, 20 AMP
			RED/BLACK, BLACK			
2	SUN ROOF CONNECTION	14 TEW	ORANGE/WHITE, BLACK	IGNITION	--	
3	LOWER CONSOLE POWR	18, 14 TEW	RED/BLACK, ORANGE, BLK	IGNITION & BATTERY	--	
4	REAR SLIDER TAP	14 TEW	RED, YELLOW	IGNITION	--	
5	AIR DAM SWITCH POWER	14 TEW	ORANGE, BLACK	IGNITION	8.6 AMP	
6	BRUSH GUARD SWITCH	14 TEW	ORANGE, BLACK	IGNITION	8.6 AMP	
7	REAR SLIDER SWITCH	14 TEW	RED, YELLOW, ORN, BLK	IGNITION	--	
8	CB HOOK-UP	18 TEW	ORANGE, BLACK	IGNITION	1.9 AMP	
9	CONSOLE SWITCH OPT.	14 TEW	ORANGE, BLACK	IGNITION	--	
10	CELLULAR PHONE	18 TEW	RED/BLACK, BLACK	BATTERY	--	
11	CB HOOK-UP (OPT.)	14 TEW	ORANGE, BLACK	IGNITION	--	
12	CELLULAR PHONE	18 TEW	RED/BLACK, BLACK	BATTERY	.4 AMP	
13	THERMOTRONIX	18 TEW	ORANGE, BLACK	IGNITION	5 AMP	
14	FLASHLIGHT	18 TEW	ORANGE, BLACK	IGNITION	.3 AMP	
15	TELEVISION	18 TEW	ORANGE, BLACK	IGNITION	2 AMP	
16	VCP	18 TEW	ORANGE, BLACK	IGNITION	1 AMP	
17	GAME READY	18 TEW	ORANGE, BLACK	IGNITION	1 AMP	
18	REAR WINDOW SLIDER	14 TEW	RED, YELLOW	SWITCHED IGNITION	7 AMP	
					TOTAL	

FINAL STAGE MANUFACTUREER:

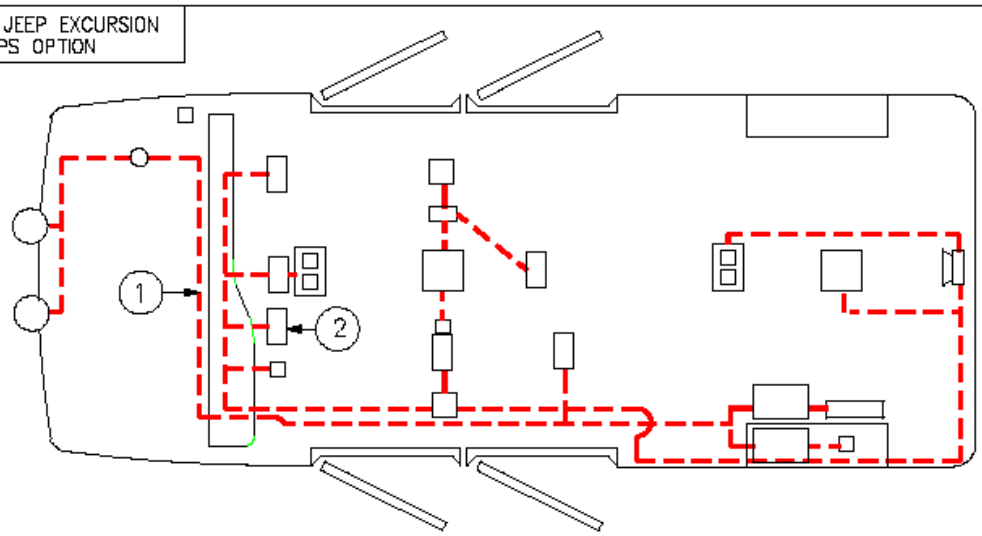
HARNESS PART #'s: 15521500, 15521520, 15521521, 15521524

97 JEEP EXCURSION
–ELECTRICAL



KEY #	PART #	DESCRIPTION	QTY	KEY #	PART #	DESCRIPTION	QTY
1	O.E.M.	POWER UP	1	12	13400200	AIR COMPRESSOR BUILT IN 250 PSI	1
2	13260190	MAIN PANEL 5–BUTTON INTELLITEC	1	13	14720010	VIDEO PLAYER VCP AUDIOVOX	1
3		CD REMOTE	1	14	14100131	OUTLET 12 VOLT W/FLIP CAP	2
4		OFF ROAD LIGHT SWITCH	1	15	N/A	GMT 4 X 6 SPEAKER (TAKE OUT)	1
5	13260405	HEADPHONE STATION JEEP	1	16	O.E.M.	FACTORY ANTENNA	1
6		POWER SUNROOF SWITCH	1	17	14472055	LIGHT FOG CLEAR W/HARNESS	1
7	14390650	TELEVISION COLOR LCD 5.6 INCH	1	18	13200705	AMPLIFIED H TV ANTENNA	1
8	15140245	SUNROOF 20 X 32 ELECTRIC	1	19		FUSE HOLDER	1
9	13210550	GAME READY KIT ACCUMAX W/QUAD	1				
10	14472205	LIGHT DOUBLE UNITEK	1				
11	13200450	CD PLAYER 6–DISC CHANGER	1				

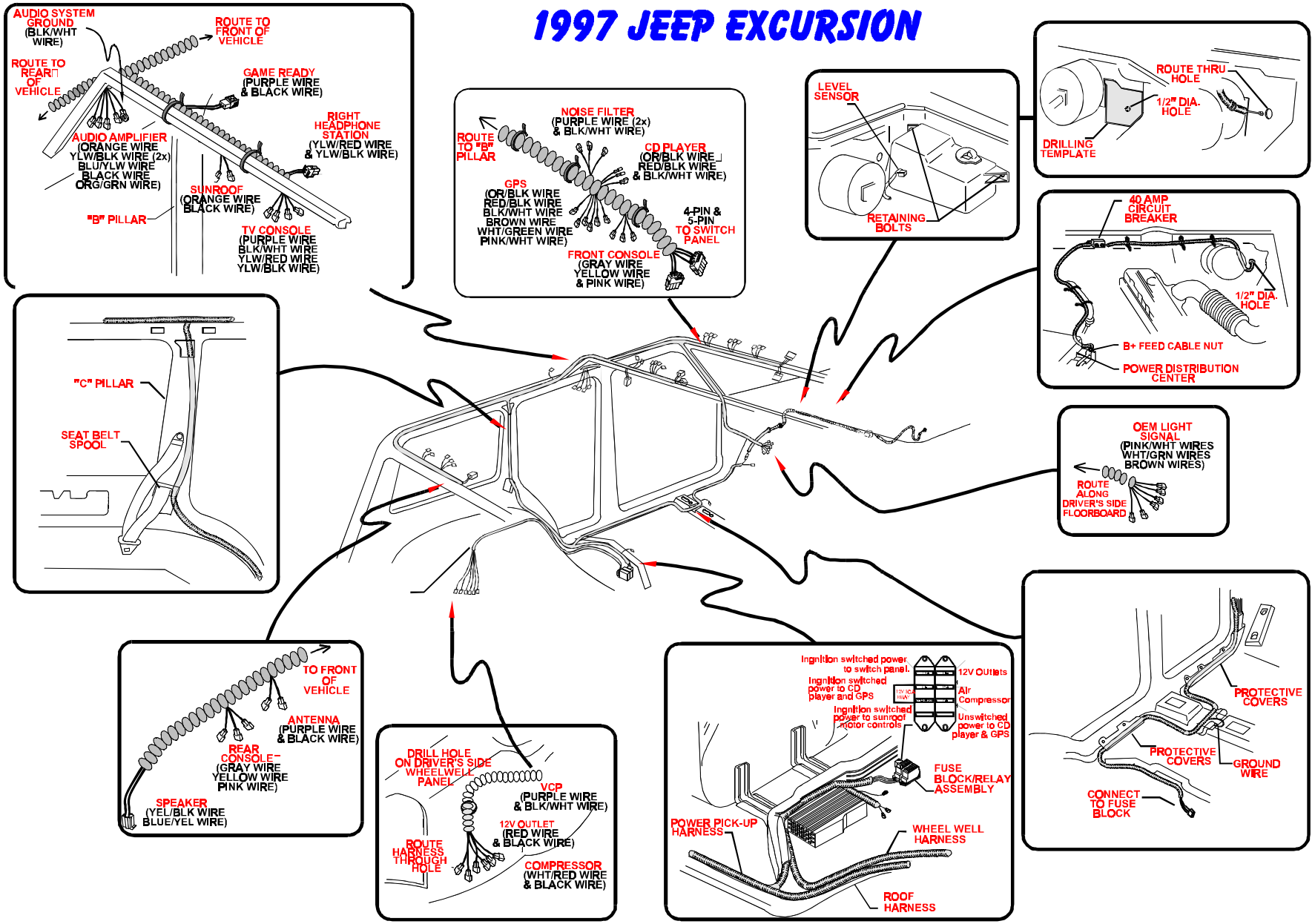
97 JEEP EXCURSION
–GPS OPTION



KEY #	PART #	DESCRIPTION	QTY	KEY #	PART #	DESCRIPTION	QTY
1	15521135	WIRE HARNESS JEEP CHEROKEE	1				
2	14391000	GLOBAL POSITIONING SENSOR	1				

Key #	Item	Color
1	Power up	RED
2	Overhead Switch	ORG/WHT, BLK, ORN/GRN, YELL/RED, VIO/WHT
3	CD Remote	MANF SUPPLIED
4	Off Road Light Switch	WHT/BLK, WHT, BLK
5	Headphone Station	YELL/BLK, YELL/RED
6	Power Sunroof Switch	ORN, ORN/BLK, BLK, ORN
7	TV	YELL/BLK, BLK/WHT, VIO, YELL/RED
8	Sunroof, Power	ORN, ORN/BLK, BLK, ORN
9	Game Ready Switch	BLK, VIO
10	Map Lights	PINK, YELL, GRAY
11	CD Player	ORN/BLK, RED/BLK, BLK/WHT
12	Air Compressor	BLK, WHT/RED
13	VCP	BLK/WHT, VIO
14	12 V Outlet	RED, BLK
15	Speaker, TV	BLU/YELL, BLK/YELL
16	Factory Antenna	COXIAL
17	Fog Lights	BLK, WHT/BLK
18	Amplifier	YELL/BLK, BLU/YELL, BLK, VIO, ORN/GRN
19	Fuse Holder	RED/BLK, WHT/RED, RED, ORN/WHT, ORN/BLK, ORN
2	GPS	PNK/WHT, WHT/ORN, BRN, BLK/WHT, RED/BLK, ORN/BLK
	Noise Filter	VIO/WHT, BLK/WHT

1997 JEEP EXCURSION


AUDIO SYSTEM GROUND (BLK/WHT WIRE)
ROUTE TO FRONT OF VEHICLE
ROUTE TO REAR OF VEHICLE
GAME READY (PURPLE WIRE & BLACK WIRE)
RIGHT HEADPHONE STATION (YLW/RED WIRE & YLW/BLK WIRE)
AUDIO AMPLIFIER (ORANGE WIRE YLW/BLK WIRE (2x) BLU/YLW WIRE BLACK WIRE ORG/GRN WIRE)
SUNROOF (ORANGE WIRE BLACK WIRE)
"B" PILLAR
TV CONSOLE (PURPLE WIRE BLK/WHT WIRE YLW/RED WIRE YLW/BLK WIRE)
NOISE FILTER (PURPLE WIRE (2x) & BLK/WHT WIRE)
ROUTE TO "B" PILLAR
CD PLAYER (OR/BLK WIRE RED/BLK WIRE & BLK/WHT WIRE)
GPS (OR/BLK WIRE RED/BLK WIRE BLK/WHT WIRE BROWN WIRE WHT/GREEN WIRE PINK/WHT WIRE)
4-PIN & 5-PIN TO SWITCH PANEL
FRONT CONSOLE (GRAY WIRE YELLOW WIRE & PINK WIRE)
LEVEL SENSOR
RETAINING BOLTS
ROUTE THRU HOLE
1/2" DIA. HOLE
DRILLING TEMPLATE
40 AMP CIRCUIT BREAKER
1/2" DIA. HOLE
B+ FEED CABLE NUT
POWER DISTRIBUTION CENTER
"C" PILLAR
SEAT BELT SPOOL
OEM LIGHT SIGNAL (PINK/WHT WIRES WHT/GRN WIRES BROWN WIRES)
ROUTE ALONG DRIVER'S SIDE FLOORBOARD
TO FRONT OF VEHICLE
ANTENNA (PURPLE WIRE & BLACK WIRE)
REAR CONSOLE (GRAY WIRE YELLOW WIRE PINK WIRE)
SPEAKER (YEL/BLK WIRE BLUE/YEL WIRE)
DRILL HOLE ON DRIVER'S SIDE WHEELWELL PANEL
VCP (PURPLE WIRE & BLK/WHT WIRE)
12V OUTLET (RED WIRE & BLACK WIRE)
ROUTE HARNESS THROUGH HOLE
COMPRESSOR (WHT/RED WIRE & BLACK WIRE)
Ignition switched power to switch panel.
Ignition switched power to CD player and GPS
Ignition switched power to sunroof motor controls
12V Outlets
Air Compressor
Unswitched power to CD player & GPS
FUSE BLOCK/RELAY ASSEMBLY
POWER PICK-UP HARNESS
WHEEL WELL HARNESS
ROOF HARNESS
PROTECTIVE COVERS
PROTECTIVE COVERS
GROUND WIRE
CONNECT TO FUSE BLOCK

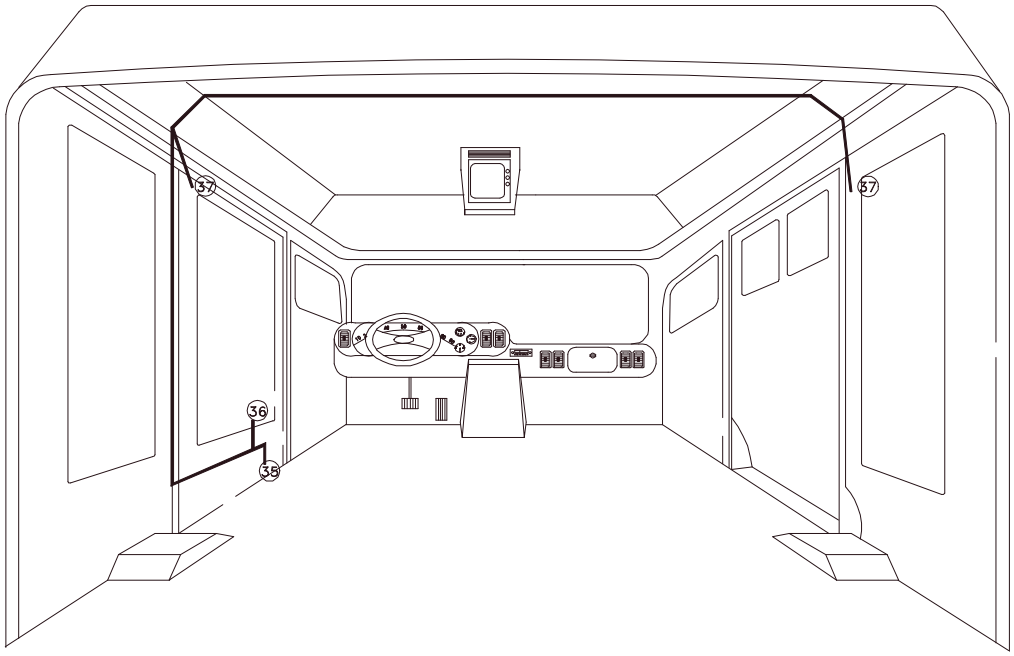
CHASIS MANUFACTURER:
FORD, GM, DODGE

MODEL YEAR:
1997

VEHICLE ELECTRICAL LAYOUT

VEHICLE TYPE:
FULL SIZE VAN

COMPLETED VEHICLE DESCRIPTION:
UNIV. LE/LX BASE HARNESS



FINAL STAGE MANUFACTURER:
MARK III

UNIVERSAL TV INTERFACE
HARNESS PART # 15522215

CHASIS MANUFACTURER:
FORD, GM, DODGE

VEHICLE TYPE:
FULL SIZE VAN

MODEL YEAR:
1997

COMPLETED VEHICLE DESCRIPTION:

CKT. #	CIRCUIT ITEMS	GUAGE	WIRE COLOR	POWER SOURCE	ACTUAL AMPS	FUSE SIZE
35	CONNECT TO 15522035	18 TEW	YEL/RED, YEL/BLK	TV	-	
36	TV SPEAKER SWITCH	18 TEW	YEL/RED, BLU/YEL	TV	-	
37	HEADPHONE STATION	18 TEW	YEL/RED, YEL/BLK	TV	-	
					TOTAL	
					-	-

FINAL STAGE MANUFACTUREER: MARK III

HARNESS PART #: 15522215

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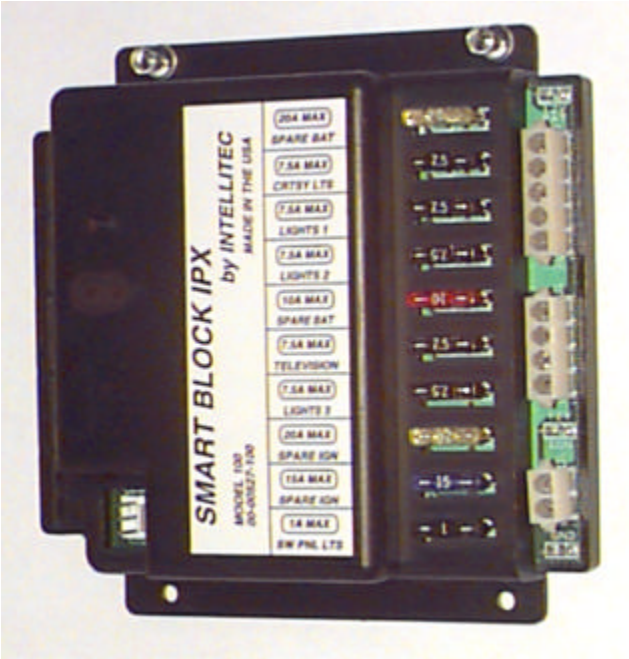
ESI Auto-Net 230 DUAL SOFA CONTROLLER ---------- 102

Trouble Shooting Guide
Electrical

Smart Fuse Block IPX (LX)



Note: The Smart Fuse Block IPX is a centralized power switching, fusing, and distribution center. Power from both the ignition and battery is fed into the block. The power of the battery is available at this box. Inadvertent shorts at this box could result in damage and/or injury.

Only a qualified Service Technician should do all servicing of this box.

Tools Required

Low current Test Light
Accurate Voltmeter (digital read-out preferred).

Product Description:

The Smart Fuse Block Plus is intended to be used in conversion vehicles. It provides fusing for the converter-added loads as well as relay controlled outputs for use with lighting and TV circuits. These relay outputs include timed and low voltage shut down features that are used to provide a number of customer pleasing features.

Following are the important customer pleasing features included in this system:

Automatic Interior Light Delay

Keeps the interior lights on for up to **12 seconds** after closing the doors. They will go out immediately when the ignition is switched on. If the doors are left open, the lights will go out in twenty minutes.

Automatic OFF with the Ignition:

The interior lights and TV/VCP turn off when the ignition switch is turned off.

Load Operation Without Keys

Allows the interior lights and TV/VCP to operate without the insecurity of having the key in the ignition.

Automatic Timed OFF Function

When the loads are operated with the ignition off, they will be automatically shut off **20 minutes** after they are turned on with a charged battery. If the battery is low, the loads will turn off in **2 minutes**. After the shut down, the loads can be turned on again for an additional **20-minute** period.

Automatic Low Voltage Shut Down

When the loads are operated, with ignition off, the battery voltage is monitored. If it goes below **12 volts**, the loads will be shut off in **2 minutes**, minimizing the risk of the loads fully discharging the battery.

Installation

This module is designed to work in all brands of vehicles. The module is mounted at the “B” pillar and gets its power from the OEM harness. Two wires are connected to the OEM dome light wires to make the interior light delay operate. The van harness is plugged into the module. Power for the entire converter - added loads is supplied from this module.

How it Works

The Smart Fuse Block IPX provides fusing and switching for all the converter-added loads. There are ten fuses on this block. Two of these fuses provide constant “hot” outputs that are to be utilized for loads such as power sofa, door locks, etc. Two others provide ignition switched power for loads that should only be operated when the ignition is on, such as rear fan, radar detector etc. Five other fuses feed relay switched outputs, These are Lights 1, Lights 2, Lights 3, TV, and Courtesy Lights. The last fuse to used to feed the back lighting on the switch panels.

Switched Outputs

Four of the switched outputs are controlled from a remote switch panel or panels if more than one is used. The switches are a momentary style operating as push on/ pull off function. These outputs can be used if the ignition is on or off. If they are on when the ignition is turned off, they will automatically be turned off. If they are used with the ignition off, they will go off automatically twenty minutes after they were turned on, to prevent them from accidentally discharging the battery. If the battery voltage is low (below 12.1 volts), the lights will be turned off in two minutes instead of the normal twenty minutes. This signals the user that the battery is going dead and should be charged before further use.

The Switched Outputs are each switched by relays in the Block. Four of these circuits are operated by the push button switches and turned off when the ignition goes off and by a twenty-minute timer. An opening of a door or ignition resets this timer.

The ignition holds the timer in reset, so these outputs will stay on all the time the ignition is on. These outputs will all be shut off when the ignition is turned off. If they are turned on after the ignition is turned off, they remain on for twenty minutes.

The timer has two speeds, which are dependent on the incoming battery voltage. If the battery is higher than 12.1 volts, the clock runs at its normal speed. If the battery drops below 12.1 volts, the clock speeds up approximately 10 times so the timer will shut off in about 2 minutes instead of the normal 20 minutes.

Lights as well as the Courtesy Lights Output, are also controlled by the door pin switches to provide the courtesy light feature. They will come on when a door is opened and stay on for twelve seconds after all the doors are closed. If any door is left open, the lights will automatically turn OFF in twenty minutes. To turn them ON again, ALL doors must be closed in order to reset the Smart Fuse Block and then resume operation.

All the switch panels operate from a common three-wire cable. These wires are used for back lighting, ground and switch signal. The Smart Fuse Block IPX switches loads by utilizing Intellitec's proprietary multiplexing system. This system is a time division type which ten, repetitive "time slots" are used to control the various functions of the system. This allows two way communications between the Block, other modules, and switch panels. With this capability, each switch panel can have on/off indicators for the various functions that operate from the three inter-connecting wires. When one of the switches is pressed, a signal for that particular channel is transmitted on the multiplex communication line. A control located either in the Block or other module of the system responds by turning that function on and off and it in turn sends out a signal on the same line to "tell" the associated indicators on the switch panels to illuminate.

Battery and Ignition Circuits

The Smart Fuse Block IPX does not control the Battery and Ignition circuits. Power to these outputs is brought into the fuse block from the OEM wiring and is fused on the block.

The Battery fuses are used for circuits that feed intermittent or uninterruptible loads, such as power sofa and 12 volt outlet, which may be used to supply a 12-volt cooler.

The ignition fuses are used for circuits that feed loads that should operate only when the ignition is turned on, such as the rear fan.

The Timer has two speeds, which are dependent on the incoming battery voltage. If the battery is higher than 12.1 volts, the clock runs at its normal speed. If the battery drops below 12.1 volts, the clock speeds up approximately 10 times so the timer will shut off in about 2 minutes instead of the normal 20 minutes.

Courtesy Lights

When the doors are opened, Lights 1, Lights 2, and Courtesy Lights circuits are turned on. This function is operated by a timer that keeps the lights on while the doors are opened and for up to 12 seconds after they are closed. If the ignition is turned on during this 12 seconds, the Courtesy Lights go out immediately. The timer gets its signal from the OEM dome light circuit. The dome light circuit is brought into the module via a two-pin plug, J2. When the door is opened, a voltage appears between these two pins. (The circuitry will accept either polarity of voltage at this plug.) When the Smart Fuse Block IPX senses 12 volts, it turns on the Courtesy Light Function.

When the doors are **all** closed, the Courtesy Light timer begins to run, holding the lights on for 12 seconds. If the ignition is turned on during this period, the lights will go out immediately.

Fuses

The fuses are the standard, plastic “ATO”, blade (automotive) type.

There are 10 positions for the fuses in the module.

The 10 fuses and their sizes are as listed:

Circuit	Fuse Number	Fuse Size	Connector Pin-Out	Source
Spare battery	F1	20 a	J5-5	Battery
Courtesy Light	F2	7.5 a	J5-4	Battery
Lights 1	F3	7.5 a	J5-3	Battery
Lights 2	F4	7.5 a	J5-2	Battery
Spare Battery	F5	10 a	J5-1	Battery
TV/VCP	F6	7.5 a	J4-4	Battery
Lights 3	F7	7.5 a	J4-3	Battery
Rear Fan	F8	20 a	J4-1	Ignition
Spare Ignition	F9	7.5 a	J4-2	Ignition
Panel Back Lt.	F10	1 a	J7-1	Switched Outputs & Ignition

Plugs - Pins and Functions

J1 - .250 Male Fastener - Power Ground (carries less than 2 amps)

J2 - 2 pin in-line Mate-N-Lok Mating Housing - AMP 1-480698-0

Pin	Function
1	From OEM Dome Light
2	From OEM Dome Light

J3 - .250 Male Fastener - Ignition Power Input

J4 - 4 pin in-line Mate-N-Lok Mating housing AMP 1-480702-0

Pin	Function	Fuse
1	Rear Fan Power	F8
2	Spare Ignition	F9
3	Lights 3 output	F7
4	TV/ VCP	F6

J5 - Pins in-line Mate-N-Lok Mating housing AMP 1-480763-0

Pin	Function	Fuse
1	Spare Battery	F5
2	Lights 2 Output	F4
3	Lights 1 Output	F3
4	Courtesy Lights Output	F2
5	Spare Battery	F1

J6 - .250 Male Fastener - Battery Input

J7 - 3 pin KK156 - Mating Housing Molex 09-50-8033

Pin	Function	Fuse
1	Panel Back Lighting	F10
2	Switch Signal	
3	Switch Panel Ground	

Switch Signal Channels:

The system uses ten separate channels to send signals between the modules and switch panels. Each function of the system is assigned to a particular channel. They are as follows:

Function	Channel
Lights 2	1
Lights 3	2
TV/ VCP	3
Lights 1	4

Trouble Shooting

Battery and Ignition Circuits:

The OEM battery and Ignition circuits are fused in the block. Power for these circuits enter the Smart Fuse Block IPX is fused and fed to the connectors, without any control. If the rear fan, 12-volt outlet, vacuum, or sofa fail to operate, check the fuses, F1 20 amp, F5 10 amp, F8 20 amp and F9 15 amp, using a test light. If any of these have failed, replace them with the same sized fuse. If these are all good, check the OEM power feeds coming into J6 and J3. Failure of these outputs would **rarely** be traced to problems in the SMART FUSE BLOCK IPX.

Switched Outputs

The switched outputs should operate each time a button is pressed, whether the ignition is on or off. To check their operation, press a button while listening to the relays in the Smart Fuse Block IPX to click. The Relays will operate even if the associated fuses are opened. Power for these circuits comes from the OEM battery circuit. If the relays do not operate, check for the presence of battery voltage at the module before going further. Each of the four-switched circuits is fused individually. If there is a problem with a particular circuit, check the fuse associated with that circuit.

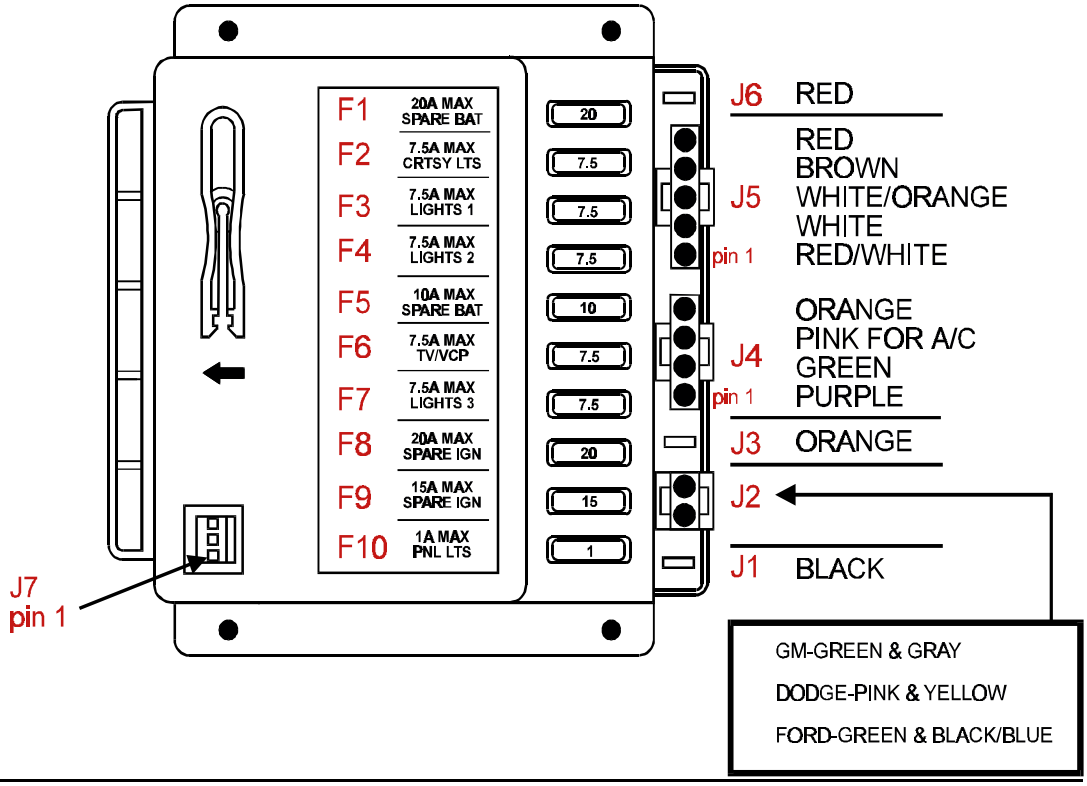
Courtesy Lights

The courtesy light output should be on when the doors are opened. If the doors are left opened for more than twenty minutes, they will go off. (If the ignition is on and the doors are opened, the lights will never go off). To check this output, open the door and turn the ignition on. Power for this circuit comes from the OEM battery circuit. Check the Courtesy Light fuse and the presence of ignition and battery voltages before going further.

Trouble Shooting

Problem	Possible Cause/ Solution
Lights or TV do not come on.	Fuses F3, F4, F6 or F7 7.5 amp open. Check and replace fuse Listen for relays clicking in module when buttons are pressed. **Clicking** relays indicate module is working. Faulty OEM battery feed. Check for power coming from the OEM battery feed at J6 Check signal line for switch voltage on J7-2. Should be 12 volts and should drop when button is pressed. If not, check wiring and switch panel. Short signal line, J7-2, to ground, Lights 1 should switch. If the above fail to fix the problem, **replace module**.
Lights and TV do not go off when ignition is turned off.	Check ignition input at J3. Should be 12 volts with ignition on and 0 volts with ignition off.
Courtesy Lights won't come on when doors are open.	Courtesy Light fuse, F2, open, Replace fuse. Door pin switches not working. Check for 12 volts between pins of J2 when doors are open. Check Courtesy Defeat Switch on dash **(GM only).**
Courtesy Lights won't go off when doors are closed.	Door pin switch stuck or shorted. Unplug J2, lights should go off in 12 seconds. Check courtesy light switch on head light switch. If the above fail to fix the problem, **replace module**.
Courtesy Lights do not stay on for 12 seconds	Check ignition feed. Should be 0 volts with ignition off. If not check input wiring.
Panel back lighting not working.	Check fuse F10. Replace if open. If the above fail to fix the problem, **replace module**.

SMART FUSE BLOCK IPX™



FUSES

The fuses used are standard, plastic "ATO", blade (automotive) type.

There are 10 positions for the fuses in the module.

The 10 fuses and their sizes are as listed:

Circuit	Fuse Number	Fuse Size	Connector Pin-Out	Power Source
Spare Battery	F1	20 Amp	J5 - 5	Battery
Courtesy Lights	F2	7.5 Amp	J5 - 4	Battery
Lights 1	F3	7.5 Amp	J5 - 3	Battery
Lights 2	F4	7.5 Amp	J5 - 2	Battery
Spare Battery	F5	10 Amp	J5 - 1	Battery
TV/VCP	F6	7.5 Amp	J4 - 4	Battery
Lights 3	F7	7.5 Amp	J4 - 3	Battery
Spare Ignition (Rear Fan)	F8	20 Amp	J4 - 1	Ignition
Spare Ignition	F9	15 Amp	J4 - 2	Ignition
Panel Back Lighting	F10	1 Amp	J7 - 1	Switched Outputs & Ignition

PLUGS - PINS & FUNCTIONS

J1 - .250 Male Faston - Power Ground (SFB + electronics carry < 2 Amps)

J2 - 2 pin in-line Mate-N-Lok Mating Housing AMP 1-480698-0

Pin	Function
1	From OEM Dome Light
2	From OEM Dome Light

J3 - .250 Male Faston - Ignition Power input

J4 - 4 pin in-line Mate-N-Lock Mating housing AMP 1-480702-0

Pin	Function	Fuse
1	Rear Fan Power	F8
2	Spare Ignition	F9
3	Lights 3 Output	F7
4	TV/VCP	F6

J5 - 5 pin in-line Mate-N-Lock Mating housing AMP 1-480763-0

Pin	Function	Fuse
1	Spare Battery	F5
2	Lights 2 Output	F4
3	Lights 1 Output	F3
4	Courtesy Lights Output	F2
5	Spare Battery	F1

J6 - .250 Male Faston - Battery Input

J7 - 3 pin KK156 - Mating housing Molex 09-50-8033

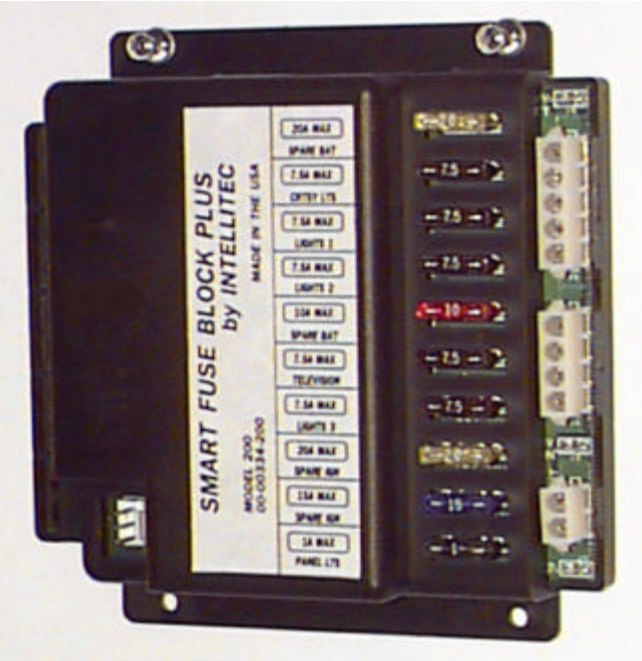
Pin	Function	Fuse	Wire Color
1	Panel Back Lighting	F10	
2	Switch Signal		(YEL)
3	Switch Panels Ground		(BRN)

SWITCH SIGNAL VOLTAGES

To turn a light or TV on or off, the voltage on the signal line is changed by pressing one of the switches on a switch panel. Each function has a corresponding voltage associated with it. They are as follows:

Function	Voltage
Lights 2	5.7 volts
Lights 3	3.5 volts
Rear Radio/TV/VCP	2.1 volts
Lights 1	1.1 volts

Smart Fuse Block Plus (LE)



Note

The Smart Fuse Block Plus is a centralized power switching, fusing, and distribution center. Power from both the ignition and battery is fed into the block. The power of the battery is available at this box. Inadvertent shorts at this box could result in damage and/or injury.

Only a qualified Service Technician should do all servicing of this box.

Tools Required

Low current Test Light
Accurate Voltmeter (digital read-out preferred)

Product Description:

The Smart Fuse Block Plus is intended to be used in conversion vehicles. It provides fusing for the converter-added loads as well as relay controlled outputs for use with lighting and TV circuits. These relay outputs include timed and low voltage shut down features that are used to provide a number of customer pleasing features.

Following are the important customer pleasing features included in this system:

Automatic Interior Light Delay

Keeps the interior lights on for up to **12** seconds after closing the doors. They will go out immediately when the ignition is switched on. If the doors are left open, the lights will go out in **20** minutes.

Automatic OFF with the Ignition

The interior lights and TV/VCP turn off when the ignition switch is turned off.

Load Operation Without Keys

Allows the interior lights and TV/VCP to operate **without** the insecurity of having the key in the ignition.

Automatic Timed OFF Function

When the loads are operated with the ignition off, they will be automatically shut off **20** minutes after they are turned on with a charged battery. If the battery is low, the loads will turn off in **2** minutes. After the shut down, the loads can be turned on again for an additional **20**-minute period.

Automatic Low Voltage Shut Down

When the loads are operated, with ignition off, the battery voltage is monitored. If it goes below 12 volts, the loads will be shut off in **2** minutes, minimizing the risk of the loads fully discharging the battery.

Installation

This module is designed to work in all brands of vehicles. The module is mounted at the “B” pillar and gets its power from the OEM harness. Two wires are connected to the OEM dome light wires to make the interior light delay operate. The van harness is plugged into the module. Power for the entire converter - added loads is supplied from this module.

Operation

When a door is opened, power is turned on to the Courtesy Lights, and Lights 1 and 2 outputs. When the doors are closed, these outputs remains on for **12** seconds or until the ignition is turned on.

How it Works

The Smart Fuse Block Plus provides fusing and switching for all the converter-added loads. There are ten fuses on this block. Two of these fuses provide a constant “hot” outputs that are to be utilized for loads such as power sofa, door locks, etc. 2 others provide ignition switched power for loads that should only be operated when the ignition is on, such as rear fan, radar detector etc. 5 other fuses feed relay switched outputs, These are: Lights 1, Lights 2, Lights 3, TV, and Courtesy Lights. The last fuse to used to feed the back lighting on the switch panels.

The Lights 1, Lights 2, Lights 3, and TV circuits are switched from a remote switch panel or panels if more than one is used. These outputs can be used if the ignition is on or off. If they are on when the ignition is turned off, they will automatically be turned off. If they are used with the ignition off, they will go off automatically **20** minutes after they were turned on, to prevent them from deeply discharging the battery. If the battery voltage is low (below 12.1 volts), the lights will be turned off in **2** minutes instead of the normal **20** minutes. This signals the user that the battery is going dead and should be charged before further use.

The door pin switches control the Courtesy Light output. This output will be on, when the doors are opened and for **12** seconds after they are closed. This output is intended to be used to feed lights such as step well lights that can only be turned on by the doors being opened or the headlight switch mounted courtesy light switch. Light circuits 1 and 2 also are controlled by the door pin switches and these lights will also be on when the courtesy lights are on. If the doors are left open, the lights will automatically go out in twenty minutes. To turn them on again, all the doors must be closed and re-opened.

All the switch panels operate from a common, three-wire cable. These wires are used for back lighting, ground, and signal. The Smart Fuse Block Plus switches loads by monitoring the voltage on the signal wire. A resistor in the Block is used to pull the signal line high. The switch panels have various values of resistors associated with each function. When one of the switches is pressed, the voltage on the signal wire is dropped to a level that corresponds to that function. Circuitry in the Block senses the voltage and switches that function on or off.

Battery and Ignition Circuits

The Battery and Ignition circuits are **not** controlled by the Smart Fuse Block Plus. Power to these outputs is brought into the fuse block from the OEM wiring and is fused on the block in a normal fashion.

The Battery fuses are used for circuits that feed intermittent or uninterruptible loads, such as power sofa and 12 volt outlet, which may be used to supply a 12-volt cooler. The ignition fuses are used for circuits that feed loads that should operate only when the ignition is turned on, such as the rear fan.

Switched Outputs

The four Switched Outputs are each switched by a relay in the block. Each of these circuits is operated by the push button switches and turned off when the ignition goes off and by a **20**-minute timer. An opening of a door or ignition resets this timer. The ignition holds the timer in reset, so these outputs will stay on all the time the ignition is on. These outputs will all be shut off when the ignition is turned off. If they are turned on after the ignition is turned off, they remain on for **20** minutes.

The timer has 2 speeds, which are dependent on the incoming battery voltage. If the battery is higher than 12.1 volts, the clock runs at its normal speed. If the battery drops below 12.1 volts, the clock speeds up approximately 10 times so the timer will shut off in about **2** minutes instead of the normal **20** minutes.

Courtesy Lights

When the doors are opened, Courtesy Lights, Lights 1, and Lights 2 circuits are turned on. This function is operated by a timer that keeps the lights on while the doors are opened and for up to **12** seconds after they are closed. If the ignition is turned on during this **12** seconds, the Courtesy Lights go out immediately.

The timer receives it's impute from the OEM dome light circuit. The dome light circuit is brought into the module via a two-pin plug, J2. When the door is opened, 12 volts appear between these two pins. (The circuitry will accept either polarity of voltage at this plug.) When the Smart Fuse Block senses 12 volts Plus, it turns on the Courtesy Light Function. When the doors are **all** closed, the Courtesy Light timer begins to run, holding the lights on for **12** seconds. If the ignition is turned on, the lights will go out immediately.

If the doors are left open, the courtesy lights will go off in **20** minutes. To get the courtesy Lights output to come on again, after this happens, the timer will have to be reset. Closing all the doors can do this and re-opening one or the ignition can be turned on.

Fuses

The fuses are the standard, plastic "ATO", blade (automotive) type.

There are 10 positions for the fuses in the module. These are fed directly from the battery, through the ignition, Switched Outputs, the Courtesy Light relay, and for panel back lighting.

The 10 fuses and their sizes are as listed:

Circuit	Fuse Number	Fuse Size	Connector Pin-Out	Source
Power Sofa	F1	20 a	J5-4	Battery
Courtesy Light	F2	7.5 a	J5-4	Ignition
Lights 1	F3	7.5 a	J5-2	Battery
Lights 2	F4	7.5 a	J5-1	Battery
Spare Battery	F5	10 a	J5-1	Battery
TV/VCP	F6	7.5 a	J4-4	Battery
Lights 3	F7	7.5 a	J4-3	Battery
Rear Fan	F8	20 a	J4-1	Ignition
Spare Ignition	F9	7.5 a	J4-2	Ignition
Panel Back Lt.	F10	1 a	J7-1	Switched Outputs & Ignition

Plugs - Pins and Functions

J1 - .250 Male Fastener - Power Ground (carries less than 2 amps)

J2 - 2 pin in-line Mate-N-Lok Mating Housing - AMP 1-480698-0

Pin	Function
1	From OEM Dome Light
2	From OEM Dome Light

J3 - .250 Male Fastener - Ignition Power Input

J4 - 4 pin in-line Mate-N-Lok Mating housing AMP 1-480702-0

Pin	Function	Fuse
1	Rear Fan Power	F8
2	Spare Ignition	F9
3	Lights 3 output	F7
4	TV/ VCP	F6

J5 - Pins in-line Mate-N-Lok Mating housing AMP 1-480763-0

Pin	Function	Fuse
1	Spare Battery	F5
2	Lights 2 Output	F4
3	Lights 1 Output	F3
4	Courtesy Lights Output	F2
5	Spare Battery	F1

J6 - .250 Male Fastener - Battery Input

J7 - 3 pin KK156 - Mating Housing Molex 09-50-8033

Pin	Function	Fuse
1	Panel Back Lighting	F10
2	Switch Signal	
3	Switch Panel Ground	

Switch Signal Voltages

To turn a light or TV on and off, the voltage on the signal line is changed by pressing one of the switches on a switch panel. Each function has a corresponding voltage associated with it. They are as follows:

Function	Voltage
Lights 2	5.7 Volts
Lights 3	3.5 Volts
TV/ VCP	2.1 Volts
Lights 1	1.1 Volts

Trouble Shooting

Battery and Ignition Circuits

The OEM battery and Ignition circuits are fused in the block. Power for these circuits comes into the BLOCK and is fused and fed to the connectors, without any control. If the rear fan, 12-volt outlet, vacuum, or sofa fail to operate, check the fuses, F1 20 amp, F5 7.5 amp, F8 20 amp and F9 15 amp, using a test light. If any of these have failed, replace them with the same size fuse. If these are all good, check the OEM power feeds coming into J6 and J3. Failure of these outputs would **rarely** be traced to problems in the BLOCK.

Switched Outputs

The switched outputs should operate each time a button is pressed, whether the ignition is on or off. To check their operation, press a button while listening to the relays in the Smart Fuse Block Plus. The Relays will operate even if the associated fuses are opened. Power for these circuits comes from the OEM battery circuit. If the relays do not operate, check for the presence of battery voltage at the module before going further. Each of the four-switched circuits is fused individually. If there is a problem with a particular circuit, check the fuse associated with that circuit.

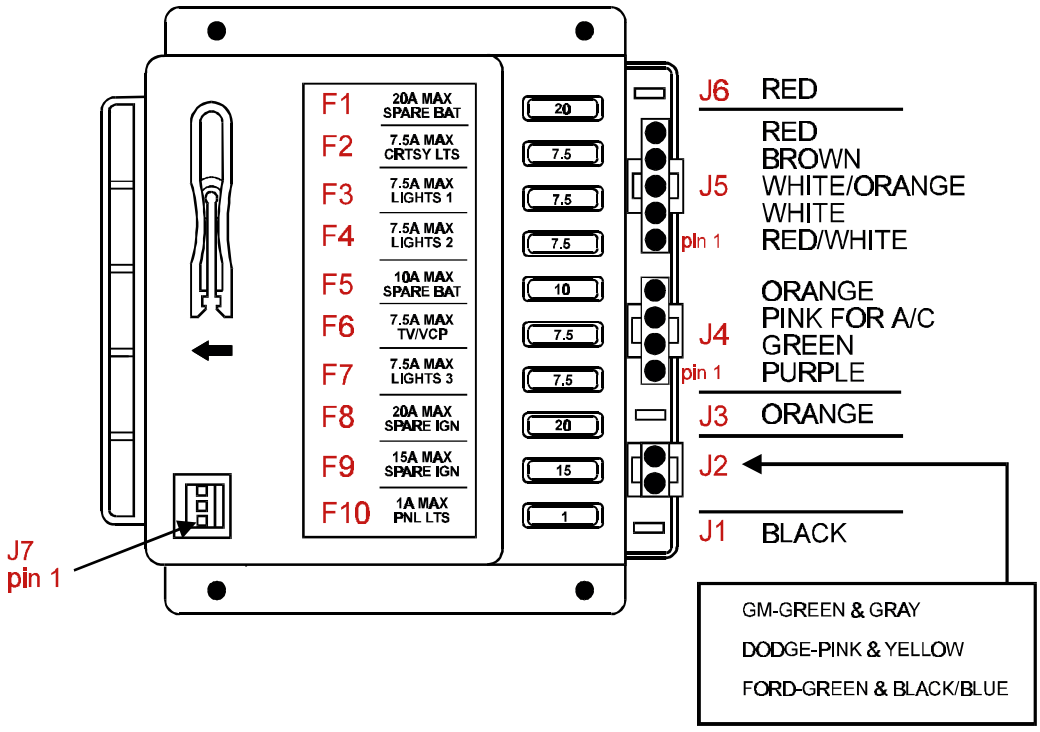
Courtesy Lights

The courtesy lights output should be on when the doors are opened. If the doors are left opened for more than **20** minutes, they will go off. (If the ignition is on and the doors are opened, the lights will never go off). To check this output, open the door and turn the ignition on. Power for this circuit comes from the OEM battery and Ignition circuits. Check the Courtesy Light fuse and the presence of these voltages before going further.

Trouble Shooting

Problem	Possible Cause/ Solution
Lights or TV do not come on.	Fuses F3, F4, F6 or F7 7.5 amp open. Check and replace fuse Listen for relays clicking in module when buttons are pressed. Clicking relays indicate module is working. Faulty OEM battery feed. Check for power coming from the OEM battery feed at J6 Check signal line for switch voltage on J7-2. Should be 12 volts and should drop when button is pressed. If not, check wiring and switch panel. Short signal line, J7-2, to ground, Lights 1 should switch. Replace Module.
Lights and TV do not go off when ignition is turned off.	Check ignition input at J3. Should be 12 volts with ignition on and 0 volts with ignition off.
Courtesy Lights won't come on when doors are open.	Courtesy Light fuse, F2, open, Replace fuse. Door pin switches not working. Check for 12 volts between pins of J2 when doors are open. Check Courtesy Defeat Switch on dash (GM only).
Courtesy Lights won't go off when doors are closed.	Door pin switch stuck or shorted. Unplug J2, lights should go off in 12 seconds. Check courtesy light switch on head light switch. Replace module.
Courtesy Lights do not stay on for 12 seconds	Check ignition feed. Should be 0 volts with ignition off. If not check wiring.
Panel back lighting not working.	Check fuse F10. Replace if open. Replace Module.

SMART FUSE BLOCK PLUS™



FUSES

The fuses used are standard, plastic "ATO", blade (automotive) type.

There are 10 positions for the fuses in the module.

The 10 fuses and their sizes are as listed:

Circuit	Fuse Number	Fuse Size	Connector Pin-Out	Power Source
Spare Battery	F1	20 Amp	J5 - 5	Battery
Courtesy Lights	F2	7.5 Amp	J5 - 4	Battery
Lights 1	F3	7.5 Amp	J5 - 3	Battery
Lights 2	F4	7.5 Amp	J5 - 2	Battery
Spare Battery	F5	10 Amp	J5 - 1	Battery
TV/VCP	F6	7.5 Amp	J4 - 4	Battery
Lights 3	F7	7.5 Amp	J4 - 3	Battery
Spare Ignition (Rear Fan)	F8	20 Amp	J4 - 1	Ignition
Spare Ignition	F9	15 Amp	J4 - 2	Ignition
Panel Back Lighting	F10	1 Amp	J7 - 1	Switched Outputs & Ignition

PLUGS - PINS & FUNCTIONS

J1 - .250 Male Faston - Power Ground (SFB + electronics carry < 2 Amps)

J2 - 2 pin in-line Mate-N-Lok Mating Housing AMP 1-480698-0

Pin	Function
1	From OEM Dome Light
2	From OEM Dome Light

J3 - .250 Male Faston - Ignition Power input

J4 - 4 pin in-line Mate-N-Lock Mating housing AMP 1-480702-0

Pin	Function	Fuse
1	Rear Fan Power	F8
2	Spare Ignition	F9
3	Lights 3 Output	F7
4	TV/VCP	F6

J5 - 5 pin in-line Mate-N-Lock Mating housing AMP 1-480763-0

Pin	Function	Fuse
1	Spare Battery	F5
2	Lights 2 Output	F4
3	Lights 1 Output	F3
4	Courtesy Lights Output	F2
5	Spare Battery	F1

J6 - .250 Male Faston - Battery Input

J7 - 3 pin KK156 - Mating housing Molex 09-50-8033

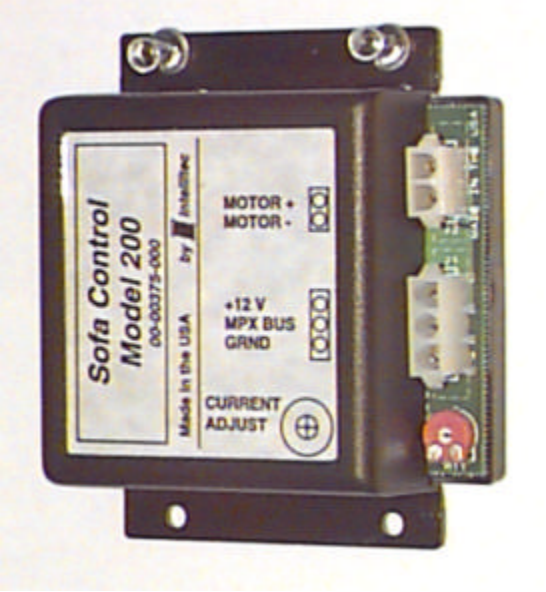
Pin	Function	Fuse	Wire Color
1	Panel Back Lighting	F10	
2	Switch Signal		(YEL)
3	Switch Panels Ground		(BRN)

SWITCH SIGNAL VOLTAGES

To turn a light or TV on or off, the voltage on the signal line is changed by pressing one of the switches on a switch panel. Each function has a corresponding voltage associated with it. They are as follows:

Function	Voltage
Lights 2	5.7 volts
Lights 3	3.5 volts
Rear Radio/TV/VCP	2.1 volts
Lights 1	1.1 volts

Sofa Control Module Model 200



Note: The MONOPLEX sofa control is a centralized power switching controller used to operate a four way, slide-recline power sofa. Power from the battery of the vehicle is fed to this control. Inadvertent shorts at this box could result in damage and/or injury. Only a qualified Service Technician should do all servicing of this box.

Tools Required

Low current test light
DC Voltmeter

Product Description

The MONOPLEX Sofa Controller is intended to be used in conversion vehicles to control the operation of a two-way or four-way, slide recline power sofa. It allows easy wiring of multiple switches and provides electronic shutdown at the end of travel to prevent annoying circuit breaker or fuse openings.

By utilizing the MONOPLEX System, only one light-gauge wire and ground are needed to connect the multiple switches. The control is located near the sofa so the four motor wires can easily be connected to it. A single 12-gauge wire feeds power to the control from the fuse block.

To operate the sofa, the three position, momentary rocker is pressed and held in the direction of the function desired (slide or recline). If the direction is wrong, the switch is released and pressed again. After the sofa has reached its desired position, the switch is released. If it is held until the sofa reaches it's mechanical stops, the control will automatically shut off the power. This feature helps prevent damage to the sofa if it is operated under a load such as someone sitting on it.

How it Works

The MONOPLEX Sofa Control utilizes relay switching to control the power to the two sofa motors. To limit the amount of current of current drawn, only one motor is allowed to operate at any given time. When the unit is at rest, all the motor leads are connected to ground. To operate a sofa motor, 12 volts are applied to the desired motor by the controller.

To prevent damaging the motors or opening of the fuse or circuit breaker, the controller senses the current drawn by the motors. If it exceeds a preset level, the controller shuts off. To restart the motor, release the switch and press it again. This will reverse the direction.

The controller operates by sensing the voltage on the MONOPLEX bus wire. When the MONOPLEX bus is at 12 volts, the motors are at rest. When the bus is at 6 volts, the controller drives the recline motor. When the bus is at 0 volts, the controller drives the slide motor. (Note: This voltage must be read with a voltmeter. A test light will offer too much load for this circuit). If more than one switch at a time is pressed, the sofa will operate in the Slide mode.

Setting the Stop Adjustment

The STOP ADJUST is used to set the level of current, above which the motor will be shut off. The proper adjustment of this control is at a level that is sufficient for proper operation of the sofa, but so high as to overload the fuse or circuit breaker.

Start the setting procedure with the control set in the approximate center of rotation. Operate the sofa, both slide and recline (lifting the back from it's open position usually requires the maximum current.), through the full range. If the sofa stops prematurely, slightly increase (turn the control clockwise) the setting and test again. If it is hitting the stops too hard, decrease (turn the control counter clockwise) the setting.

Trouble Shooting

The controller contains three relays to drive the two motors in both directions. A simple test to see if the controller is operating can be done by disconnecting the sofa motors, pressing a switch, and listening to the relays. At each press of the switch, at least one relay should click.

Problem	Possible Cause/Solution
Sofa doesn't move in one or either direction	Sofa jammed. Check for mechanical obstructions. Clear path. Power not coming from fuse block. Check for 12 volts on pin J1. Replace fuse Ground connection missing. Faulty switch wiring. Momentarily ground J7, relays should close, sofa should slide. If not, check for power at J2, J3, J4, and J5. One terminal has 12 volts. If not, replace control Motor wires disconnected or broken. Check and repair wiring.
Sofa doesn't move to mechanical stop.	Stop current miss-adjusted. re-adjust Stop control to higher level. **(Warning: raising this setting too high may cause opening of the circuit protection).**

Pins and Function

Pin	Function
J1	+12 volt power impute
J2	Slide motor common
J3	Recline Motor Common
J4	Recline Motor +
J5	Slide Motor +
J6	Ground
J7	MPX bus

ESI AUTO-NET 440 LOAD MANAGER

Operation

Your Mark III Conversion Vehicle may be equipped with an Auto-Net 440 Load manager. The Auto-Net 440 distributes the battery voltage to the power front seats and rear sofa. The purpose of the Auto-Net 440 is to limit the use of the power seats and rear sofa to one operation at a time. By limiting the usage, there will be a reduction in current drawn from the battery.

Driver Seat - The driver can always adjust his/her seat, even if the passenger seat or sofa is being operated. If the passenger seat or rear sofa is in operation, these seats will stop functioning if the driver begins to operate his/her seat.

Passenger seat - The passenger can adjust his/her seat if neither the driver seat not the rear sofa is being operated. The passenger seat will stop functioning when the driver begins to operate

Rear Sofa - The rear sofa can be adjusted if neither the driver seat nor the passenger seat is being operated. The rear sofa will stop functioning when the driver begins to operate his/her seat while the rear sofa is in operation.

Installation

The Auto-Net 440 is equipped with 0.250” male spade terminals for easy connection to the wire harness. No adjustments need to be made to the Auto-Net 440 once it is properly installed. The Auto-Net 440 is protected against reverse wiring. The following describes the connections to the Auto-Net 440:

Battery - The fused input to power the seats, usually from the fuse block. It is not recommended to connect this to any power source that is not fuse protected.
Load A - The power output to be connected to the driver seat.
Load B - The power output to be connected to the passenger seat.

Load C - The power output to be connected to the rear sofa controller.
Ground - The ground for the Auto-Net 440 **ONLY**. This terminal is not designed as ground for the motors of the power seats. A wire with a ring terminal is included and can be used as the ground for the Auto-Net 440. If the spade terminal is used instead of the wire/ring terminal, the wire/ring should be cut and discarded.

SERVICE

Tools Required: VoltMeter, Two (2) #1156 lamps connected in parallel.

Problem: None of the seats are functional.
Troubleshooting: Measure for voltage between Auto-Net 440 “Ground” and “Battery”. If no voltage is present check fuse at fuse block or bad wiring. Verify Auto-Net 440 is properly grounded.

If 11.0 - 14.5 volts is present, disconnect wires from LOAD A, LOAD B, and LOAD C on the Auto-Net 440. Measure for voltage between ground and each LOAD pin. If 11.0 - 14.5 volts is present, reconnect one wire at a time and measure voltage. If all three LOAD pins still have 11.0 - 14.5 volts after all wires are connected, troubleshoot wiring and motors of seats. If the voltage is not present after the wires are reconnected, check for a short or current draw on one of the LOAD pins.

If the LOAD wires are disconnected, there is 11.0 - 14.5 volts measured between GROUND and BATTERY of the Auto-Net 440, and **no output voltage** on the LOAD pins, **replace the Auto-Net 440**.

Note

Even though the Auto-Net 440 shuts off power to the passenger seat and sofa, there should always be an output voltage from LOAD A.

Problem: Passenger Seat or Sofa stop working when the driver seat is on.
Troubleshooting: This is the normal operation of the Auto-Net 440.

Problem: Not all seats are functional.
Troubleshooting: Without any seat operating, measure for presence of 11.0 - 14.5 volts on each LOAD pin. If voltage is present, activate power seat or sofa. Verify voltage is still present for that particular LOAD pin. Check motor, switch, or wiring for seat.

If no voltage is present on one LOAD pin, disconnect LOAD wires. Measure for voltage between ground and each LOAD pin. If 11.0 - 14.5 volts is present, reconnect one wire at a time and measure voltage. If all three LOAD pins still have 11.0 - 14.5 volts after all wires are connected, troubleshoot wiring and motors of seats. If the voltage is not present after the wires are reconnected, check for a short or current draw on one of the LOAD pins.

If the LOAD wires are disconnected, there is 11.0 - 14.5 volts measured between GROUND and BATTERY of the Auto-Net 440, and no output voltage on the LOAD pins, replace the Auto-Net 440.

The AUTO-NET 440 requires a minimum current draw of **2** Amps on the LOAD pins in order for it to switch off the other circuits. To verify the Auto-Net 440 is functioning correctly, two #1156 lamps can be **parallel** to simulate the required current draw.

The following conditions will occur when the lamp is connected between vehicle ground and each LOAD pin:

LOAD connected to LOAD A - lamp will not light no voltage present on LOAD B or LOAD C.

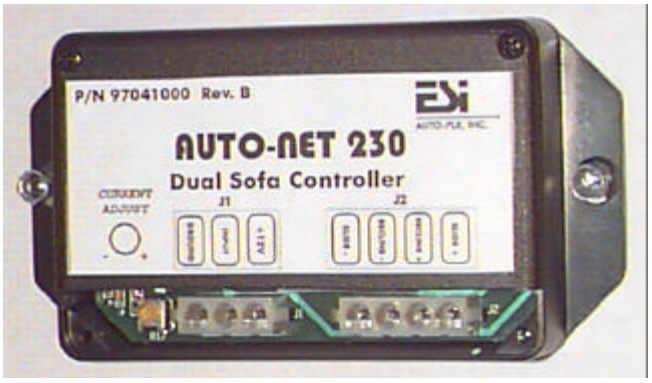
LOAD connected to LOAD B - lamp will not light, no voltage present on LOAD C, voltage will still be present on LOAD A.

LOAD connected to LOAD C - lamp will not light, no voltage present on LOAD B, voltage will still be present on LOAD A.

Note

IF ANY OF THESE OPERATIONS DO NOT FUNCTION, REPLACE THE MODULE.

ESI Auto-Net 230 Dual Sofa Controller



Your Mark III Conversion vehicle may be equipped with a power slide and recline sofa. An Auto-Net 230 interprets the overhead and rear switches and moves the sofa in the proper direction. The Auto-Net 230 performs the recline up and down along with the slide forward and back. Only one motion can occur at a given time. The Auto-Net 230 provides four directions of travel from a two-direction switch.

Overhead Switch

When the sofa needs to recline up or down, depress the left sofa button and hold it. If the sofa is traveling in the wrong direction, release the switch. Once again depress the switch and hold it. The sofa should be traveling the opposite direction. Release the switch once the sofa is in the desired position. An automatic shut-off will stop the motor at the end of travel.

When the sofa needs to slide forward or back, depress the right sofa button and hold it. If the sofa is traveling in the wrong direction, release the switch. Once again depress the switch and hold it. The sofa should be traveling the opposite direction. Release the switch once the sofa is in the desired position. An automatic shut-off will stop the motor at the end of travel.

Rear switch panel

When the sofa needs to recline up or down, depress the top of the switch marked “U/D” and hold it. If the sofa is traveling in the wrong direction, release the switch. Once again depress the switch and hold it. The sofa should be traveling the opposite direction. Release the switch once the sofa is in the desired position. An automatic shut-off will stop the motor at the end of travel.

When the sofa needs to slide forward or back, depress the bottom of the switch marked “F/B” and hold it. If the sofa is traveling in the wrong direction, release the switch. Once again depress the switch and hold it. The sofa should be traveling the opposite direction. Release the switch once the sofa is in the desired position. An automatic shut-off will stop the motor at the end of travel.

Installation

The Auto-Net 230 utilizes two (2) AMP Mate-n-Lok connectors for connection to the sofa power, and switches.
The three- (3) pin connector has the following usage:
Pin 1 - Vehicle ground (supplies groundside for motor)
Pin 2 - Switch output
Pin 3 - Fused battery input

The four- (4) pin connector has the following usage:
Pin 1 - Motor B-
Pin 2 - Motor A-
Pin 3 - Motor A+
Pin 4 - Motor B+

A fused battery input capable of sourceing 30 Amps is connected to the battery Input of the Auto-Net 230. A vehicle ground capable of carrying 30 Amps must also be connected to the Auto-Net 230.

A modified rocker switch or push-button switch is required to operate the Auto-Net 230. The rocker switch must have a 470ohm resistor connected to the outer terminals. The switch input of the Auto-Net 230 is connected to the center terminal of the switch. Ground is connected to the lower terminal of the switch. The upper terminal of the switch is not connected to any wires.

The motors are connected directly to the four-pin connector of the Auto-Net 230. The Auto-Net 230 supplies the proper voltages to the motors for the required direction of travel. The motors should not be grounded or directly connected to any other source for power other than the Auto-Net 230.

The Auto-Net 230 has a current adjust to cut-off the power to the motors during a stall. The Auto-Net 230 comes factory shipped with the setting at midpoint which, is equivalent to 20-22 Amps. Some adjustment may be necessary based upon any drag the sofa possess from installation and other unknown conditions. To test the proper level, send the sofa in one direction until it stalls. The power should disconnect after 2 - 3 seconds. If it does not, the level needs to be lowered. If the motor stalls before reaching the end of travel, the level needs to be increased.

Tools required: Voltmeter

Problem: All directions of sofa are non-functional.
Troubleshooting: Measure for 11.0 - 14.5 volts between pin 1 and 3 of the three-pin connector. If no voltage is measured, check fuses at fuse block or check for bad wiring.

If voltage is present, measure voltage at pin 2 of three-pin connector. The voltage should be approximately 12 volts with no switch closure. When the switch is closed, the voltage should drop to 3 - 6 volts in one direction of the switch and 0.5 to 3 volts in the other direction. If voltage doesn't drop when the switch is closed, check switch and switch wiring.
If the relays are heard clicking on when the switch is closed, check motors or bad wiring to motors. If necessary replace, Auto-Net 230.

Problem: Motor stops before end of travel.
Troubleshooting: Adjust the setting of the current level to accommodate surges or frame binding. It is not recommended to exceed the 75% limit of the adjustment. If this is necessary, it is advisable to check motors and frame for drag.

Graphics Trouble Shooting Guide

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Trouble Shooting Guide
Graphics

General Information

General Requirements

☛ IMPORTANT:

The following information should be carefully reviewed before proceeding:

Tools

- Plastic Applicator, PA-1 (Blue or Gold)*****
- Masking Tape
- Felt Block Applicator******
- Low Friction Sleeve, SA-1*****
- (For certain applications, such as unpremashed screen-printed Graphics, use a low friction sleeve on the plastic applicator to minimize the possibility of surface scratching).
- Pin or air release tool*****
- Razor blades
- Industrial heat gun
- Detergent and water solution (1% or 1/2 teaspoon per quart of water)

Solvents

- DuPont's Prep-Sol Brand Solvent Cleaner
- Isopropyl Alcohol
- VMP Naphtha

***** Available from 3M
****** Available from local craft store

Application Temperature

The graphics tape can be applied when air and application surface temperatures are **between 65 degrees and 90 degrees**. Surfaces may be heated in order to raise the surface temperature. Portable heater, heat lamps, or hot water may accomplish this.

Surface Preparation

All surfaces must be considered contaminated and must be cleaned prior to application of film or fabricated parts. On repainted vehicles, paint must be thoroughly dry before any attempt to apply decals to the vehicle is made. 48 hours after painting is recommended.

The recommended procedure is as follows:

1. Wash the surface with detergent and water before solvent wiping.
2. Dampen a clean cloth with Isopropyl alcohol or DuPont Prep-Sol Brand Solvent Cleaner #3919S and wipe the substrate surface.
3. Dry the surface with lint-free cloth before the solvent evaporates.

Application Procedure

Key Points

1. Make sure the surface temperatures are between the minimum and maximum specified.
2. Air surface temperatures should be between the minimum and maximum specified.
3. Position the stripe to the vehicle. Use one of the following methods:

- For large pieces or stripes position and hold the graphics on the vehicle. Apply masking tape to position and hold the graphics on the vehicle. Apply a masking tape hinge to the piece to further stabilize it to the vehicle.
- If the graphics tape is small, freely position and apply the part after liner removal.

4. Remove the liner. The liner is best removed by flicking a corner of the film away from the liner. Remove the liner at 180 degrees from the marking.
5. For large graphics or long stripes, a wet application method is usually suggested. After the liner has been removed, liberally spray the adhesive side of the part with the suggested detergent and water solution. Apply the part to the vehicle as usual, but be sure to squeegee out all liquid from beneath the graphics.
6. Using a 4-inch plastic squeegee, pressurize the graphics to the vehicle. Use vertical, firm, overlapping strokes. Hold the end of the graphics off the vehicle with light tension to prevent it from pre-adhering and foaming air bubbles.
7. Remove the application tape from the graphics at a 180-degree angle to the graphic design. Use a slow constant speed, taking care to avoid pulling against the graphic areas containing points or sharp corners.
8. Repressurize the entire surface of the tape stripe with the squeegee to obtain maximum adhesion to the painted area and to remove all air bubbles and wrinkles.
9. Inspect application for bubbles and/or areas not completely pressurized. Remove bubbles as follows:
10. Use a straight pin or air release tool, puncture the bubble at its edge.
11. Use finger or squeegee to force air out through the hole made in the film.

Note

All SCOTCHAL High Performance Protective 8598/8599 Film

12. This film is applied exactly like the SCOTCHAL decorative films **except** the film should always be applied wet using a 50/50 mixture of isopropyl alcohol and water.

Maintenance

Cleaning Materials

A wet, non-abrasive cleaner of the type suitable for high quality painted surfaces is recommended for use on graphics fabricated with SCOTCHAL. The cleaner chosen must be:

1. Non - abrasive
2. Neither highly acidic or highly alkaline.
3. Free of strong aromatic solvents or alcohol.

Cleaning Procedure

1. Wash the marking with a soft brush, rag, or sponge using a detergent, which satisfies the above requirements such as Dreft, Vel or Surf. Wash thoroughly from the top down. Avoid abrading the surface by unnecessary scrubbing. Once suds have been applied, keep a steady stream of water flowing on the surface to wash away any dirt particles.
2. Rinse the entire surface with clean water. Allow to drain dry.
3. If tar, oil diesel smut, or bituminous material remains after completing step 1 and 2 above, wipe with a rag dampened with kerosene, mineral sprits, heptane, or VM&P Naphta*****. Do not use other solvents. Wash with detergents and water, then rinse with clean water.
4. To remove pollen and fungus, wash the surface with a 3 - 5% sodium hypchlorite (Hilex, Clorex, etc.)***** Solution or detergent and water. Rinse with clean water.
5. To remove crayon, lipstick, etc. select an appropriate solvent (such as kerosene, mineral spirits, heptane, or VM&P Naphtha.)***** Which testing shows to be efficient in removing the contaminant.

Graphics Removal

The following are recommended removal methods for SCOTCHAL graphic films.

Method A

In order to remove SCOTCHAL graphic markings with a minimum of damage to the substrate, the following methods are recommended:

1. Use Wood grain and Stripe Remover, ***** Part Number 08909, available from 3M.
2. Use a Brand Natural Cleanser***** for any remaining adhesive residue. Follow the directions on the can.

Method B

The following method makes use of heat as a method of removal.

1. Heat one corner of the graphics film with a heat gun, heat lamp, or hot water. Insert a razor or knife-edge under the corner to loosen the graphics film from the surface. Pull film back slowly at less than 90 degree angle while continuing to apply heat to the film just ahead of the area which is being removed. Slow pulling action is required where paint to metal bond may be weak.
2. If adhesive residues remains after removal of film, such adhesive may be removed by using 3M Brand Natural Cleaner***** and then scraping with the PA-1 Plastic Applicator.

☛ * See the appropriate MSDS sheets for proper handling and disposal methods.

Method C

Scotch-Brite Molding Adhesive and Stripe Removal Discs are fast and easy to use. The unique construction of the discs assures long life and allows easy conformability to contours. Because the discs are flexible and have no sharp edges, they will not damage underlying paint. **Not recommended for use on acrylic lacquer paints.** The discs are faster and cleaner than solvent or chemical adhesive removers and are non-combustible as well.

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Custom Wheels and Tires Trouble Shooting Guide

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2. Balancing Wheels ---------- 110
3. Wheel Installation---------- 110

☛ Warning

Vehicles equipped with aluminum wheels need to be maintained to proper lug torque. Upon initial installation, lug nuts must be torqued. After the first 50 miles, lug nuts must be retorqued per the torque specification chart. This procedure must be repeated whenever the wheel is removed from the vehicle.

Load Ratings of Wheels

Wheel load ratings are based on the vehicle weight that each wheel is capable of safely carrying.

Because of the cargo carrying design of pickups and utility vehicles, they are subject to greater loads on the rear wheels than passenger cars. Caution must be taken to insure that the total rear axle load (cargo + vehicle) does not exceed the load rating of the wheels. Caution must also be taken to insure that the maximum tire diameter is not exceeded.

☛ Warning

Do not exceed the maximum tire diameter as stated on the load-rating label.

☛ Warning

Do not exceed 40 PSI when seating the tire to the bead of the rim.

Balancing Wheels

It is highly recommended that all four wheel and tire assemblies be balanced dynamically from the bolt holes to reduce tire wear, road noise and vibration. If a static (bubble) balance is used this should also be from the boltholes.
Wheels with steel rims accept conventional clip-on weights.
Aluminum rims accept clip-on weights for aluminum wheels, the use of adhesive weights is not recommended.
All wheels are checked for LATERAL and RADIAL run out before leaving the factory to minimize balancing problems. If difficulty in balancing is encountered, check for improper installation, balancing or tire truness. A suggested remedy to some balancing problems is to deflate the tire, rotate approximately 180 degrees on the rim, re-inflate and re-balance.

Wheel Installation

☛ Warning

Check the lug nut thread engagement. The engagement must be at least equal to the diameter of the thread; less thread engagement is unsafe and can cause loss of torque.

☛ Warning

Do not allow the lug nut to bottom out on the stud shoulder or on the mounting surface, this is an extremely dangerous and unsafe condition, as the torque of the lug nut is not actually being applied to the wheel.

1. Lug nuts should be tightened in a criss-cross (star) pattern to insure uniform pressure and alignment.
2. The use of impact wrenches is not recommended due to the possibility of irregular tightening, thread stripping or inaccurate torque. Additionally, their use can mar the finish of some wheels. A thin wall socket and torque wrench must be used for proper installation.
3. Tighten all lug nuts to the vehicles owners manual recommendation or use the following torque specifications:

Custom Wheels

Custom wheels with the lug nuts covered by a cap use the same lug nut as OEM wheels. Custom wheels with the lug nuts exposed use a special lug nut.

☛ Warning!

Lug nut torque for custom wheels must be checked at the 50 miles and after lug nuts are removed for any reason.

The proper lug nut torque is as follows:

Torque Specifications

- Standard single wheel axle is **85** ft. Lb.
- Optional dual wheel axle with stainless steel wheel covers is **105** ft. Lb.
- Optional dual wheel axle with Alcoa aluminum wheels is **140** ft. Lb. These wheels utilize a decorative plastic lug nut covers. To remove the 1 1/16” lug nut, remove the plastic decorative covers first.

☛ Warning!

Failure to properly torque lug nuts at the prescribed intervals could result in the lug nuts loosening and coming off, wheel loss, damage to the vehicle and serious personal injury or death.

Table of Contents

Rear Air Auxiliary Unit Trouble Shooting Guide

1. Dodge “B” Van Information ---------- 113
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Chrysler/Dodge B-Van

Pro Air Unit Location:

The Pro Air Unit is located on the Driver's side, midway between the front and rear tires, inside the interior wall. A/C and Heater hoses drop through the floor at this point and are routed forward into the engine compartment (see page 1.1 "Factory Connection Points"). The air ducts also attach to the unit at this point and continue up the wall into the ceiling.

CAUTION: Located near the unit and built into the wall is a vent which must be kept clear to maintain adequate air flow through the evaporator. Do not block off this vent. Also, the louvers in the ceiling must be partially open while the unit is operating. If the louvers are completely closed, air backup will result in possible damage to the blower assembly.

Pro Air Unit Operation:

The rear air conditioning system will function with the dash mode control positioned in the "MAX A/C" or "NORM" location. The rear heating system will function to its maximum potential with the dash mode control positioned in the "HEAT" location. When the dash mode control is positioned in the "DEFROST" mode, the air conditioner continues to cycle and circulate refrigerant throughout the system. The output of rear heat will be moderated in the "DEFROST" position.

Pro Air Unit Requirements:

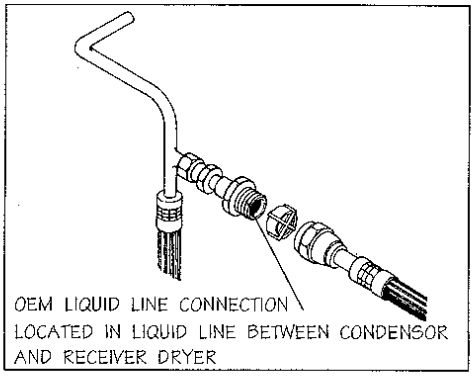
This Pro Air Unit contains Refrigerant-134a (R-134a). **DO NOT** add or replace with Refrigerant-12 (R-12/Freon). Adding R-12 to an R-134a system may cause component damage or poor A/C system performance. Use only PAG (Polyalkylene Glycol) synthetic lubricant within a R-134a system.

SYSTEM CAPACITIES			
Fluids	**Pro Air Rear Unit**	**OEM Dash Unit**	**Total**
Refrigerant-134a (R-134a)	7oz. (.44lbs)	40oz. (2.5lbs.)	47oz. (2.94lbs.)
PAG lubricant (Daphne Hermetic Oil 4239 PS)	3oz.	8oz.	11oz.
Anti-Freeze	Add approximately 1/2 gallon of a 50/50 mixture of anti-freeze/water to the vans cooling system when installing a Pro Air Rear Unit.		

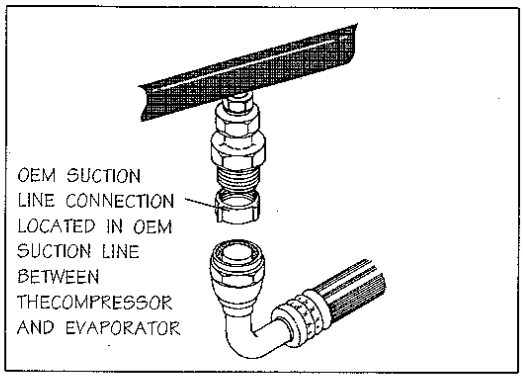
NOTE: The refrigerant capacity for the Pro Air rear unit should not be confused with the Factory auxiliary rear unit which requires 20oz. (1.25lbs.) of R-134a and is stated on the OEM sticker in the engine compartment on the front evaporator housing. The Pro Air sticker is located in this same area.

1997 DODGE B-VAN FACTORY CONNECTION POINTS

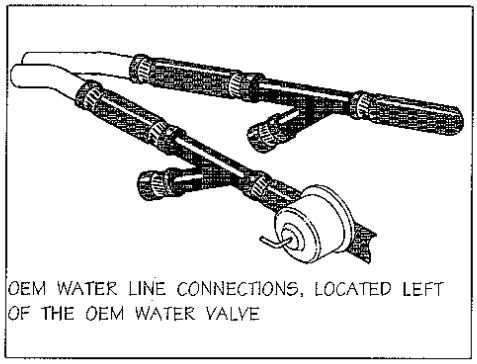
The Chrysler Motor Corporation has provided for upfitters, OEM connection points to interface with OEM heating, cooling and electrical systems. This package is labelled HBC.



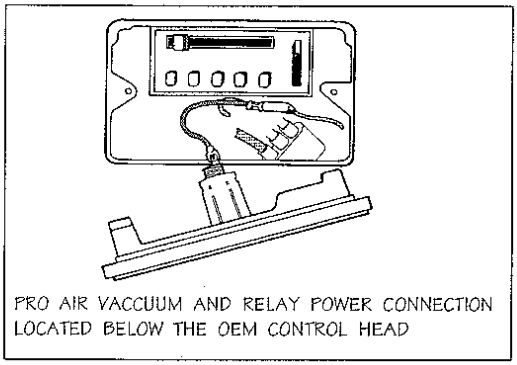
OEM LIQUID LINE CONNECTION LOCATED IN LIQUID LINE BETWEEN CONDENSOR AND RECEIVER DRYER



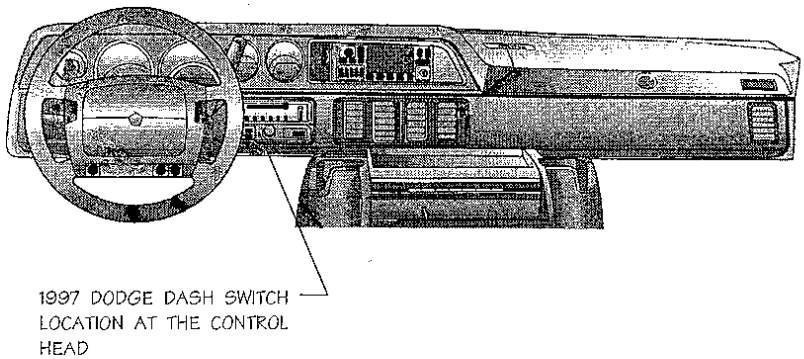
OEM SUCTION LINE CONNECTION LOCATED IN OEM SUCTION LINE BETWEEN THECOMPRESSOR AND EVAPORATOR



OEM WATER LINE CONNECTIONS, LOCATED LEFT OF THE OEM WATER VALVE



PRO AIR VACCUUM AND RELAY POWER CONNECTION LOCATED BELOW THE OEM CONTROL HEAD

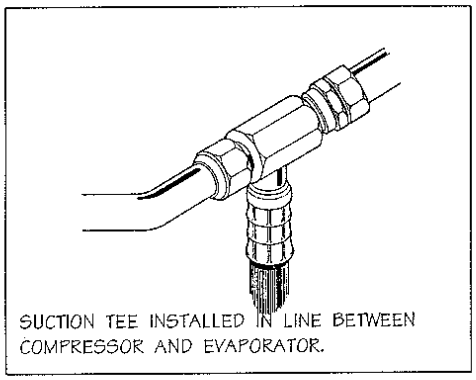


1997 DODGE DASH SWITCH LOCATION AT THE CONTROL HEAD

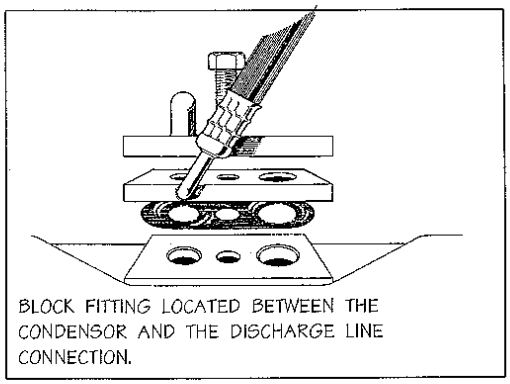
PRO AIR, INC.
PG 1.1

1997 DODGE B-VAN FACTORY CONNECTION POINTS W/O HBC

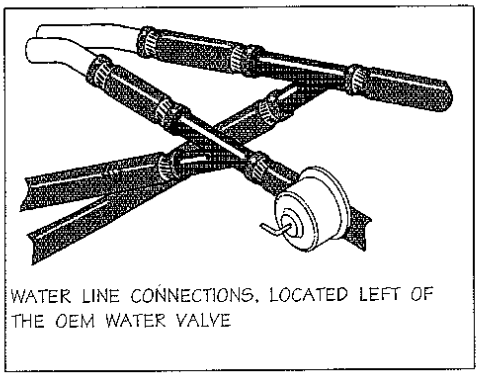
For vehicles without the HBC package, the locations for A/C and heat connections are shown below.



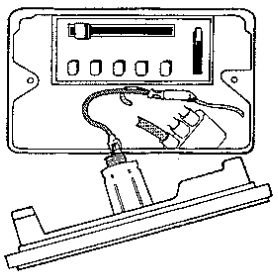
SUCTION TEE INSTALLED IN LINE BETWEEN COMPRESSOR AND EVAPORATOR.



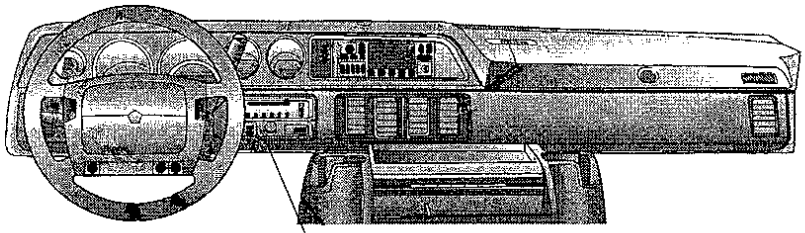
BLOCK FITTING LOCATED BETWEEN THE CONDENSOR AND THE DISCHARGE LINE CONNECTION.



WATER LINE CONNECTIONS. LOCATED LEFT OF THE OEM WATER VALVE



PRO AIR VACCUUM AND RELAY POWER CONNECTION LOCATED BELOW THE OEM CONTROL HEAD



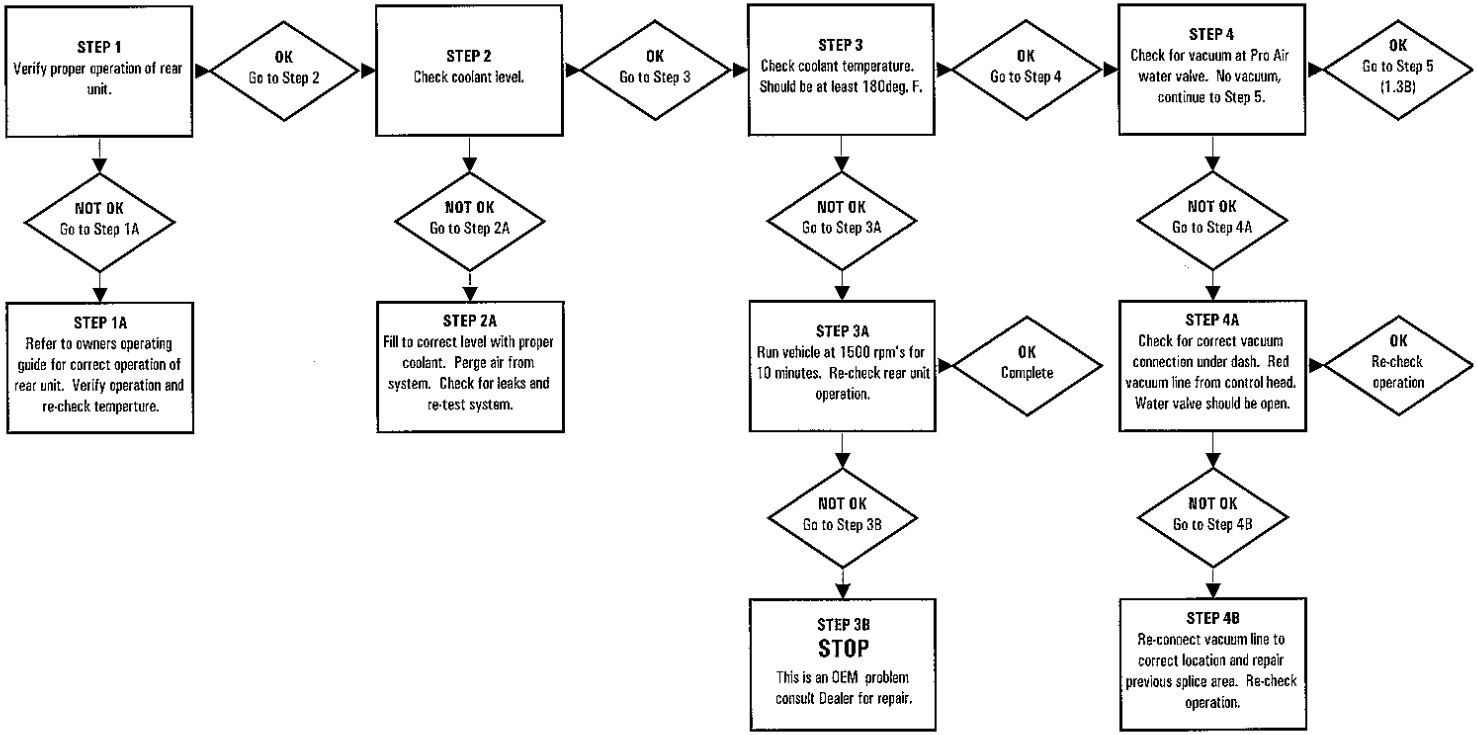
1997 DODGE DASH SWITCH LOCATION AT THE CONTROL HEAD

PRO AIR, INC.

Chrysler/Dodge B-Van Diagnosis Flow Chart
Heat Concerns w/HBC

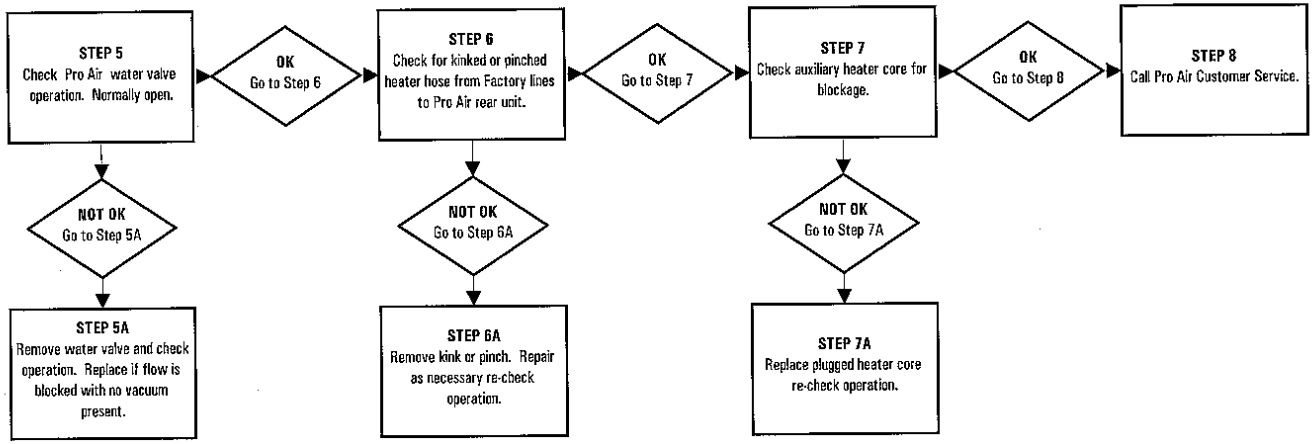
NOTES:

1) Heat temperatures should be checked at closest louver to Pro Air unit.
2) The rear unit fan speed should be set on "HIGH".
3) The vehicle should be fully warmed up for best results.
4) The vehicle should be running above idle when performing heat tests, 1200 to 1500 rpm's.
5) The vehicle's control head must be set on floor mode for correct water valve operation.


STEP 1
Verify proper operation of rear unit.
OK
Go to Step 2
STEP 2
Check coolant level.
OK
Go to Step 3
STEP 3
Check coolant temperature. Should be at least 180deg. F.
OK
Go to Step 4
STEP 4
Check for vacuum at Pro Air water valve. No vacuum, continue to Step 5.
OK
Go to Step 5 (1.3B)
NOT OK
Go to Step 1A
NOT OK
Go to Step 2A
NOT OK
Go to Step 3A
NOT OK
Go to Step 4A
STEP 1A
Refer to owners operating guide for correct operation of rear unit. Verify operation and re-check temperture.
STEP 2A
Fill to correct level with proper coolant. Perge air from system. Check for leaks and re-test system.
STEP 3A
Run vehicle at 1500 rpm's for 10 minutes. Re-check rear unit operation.
OK
Complete
STEP 4A
Check for correct vacuum connection under dash. Red vacuum line from control head. Water valve should be open.
OK
Re-check operation
NOT OK
Go to Step 3B
NOT OK
Go to Step 4B
STEP 3B
STOP
This is an OEM problem consult Dealer for repair.
STEP 4B
Re-connect vacuum line to correct location and repair previous splice area. Re-check operation.

PRO AIR, INC.

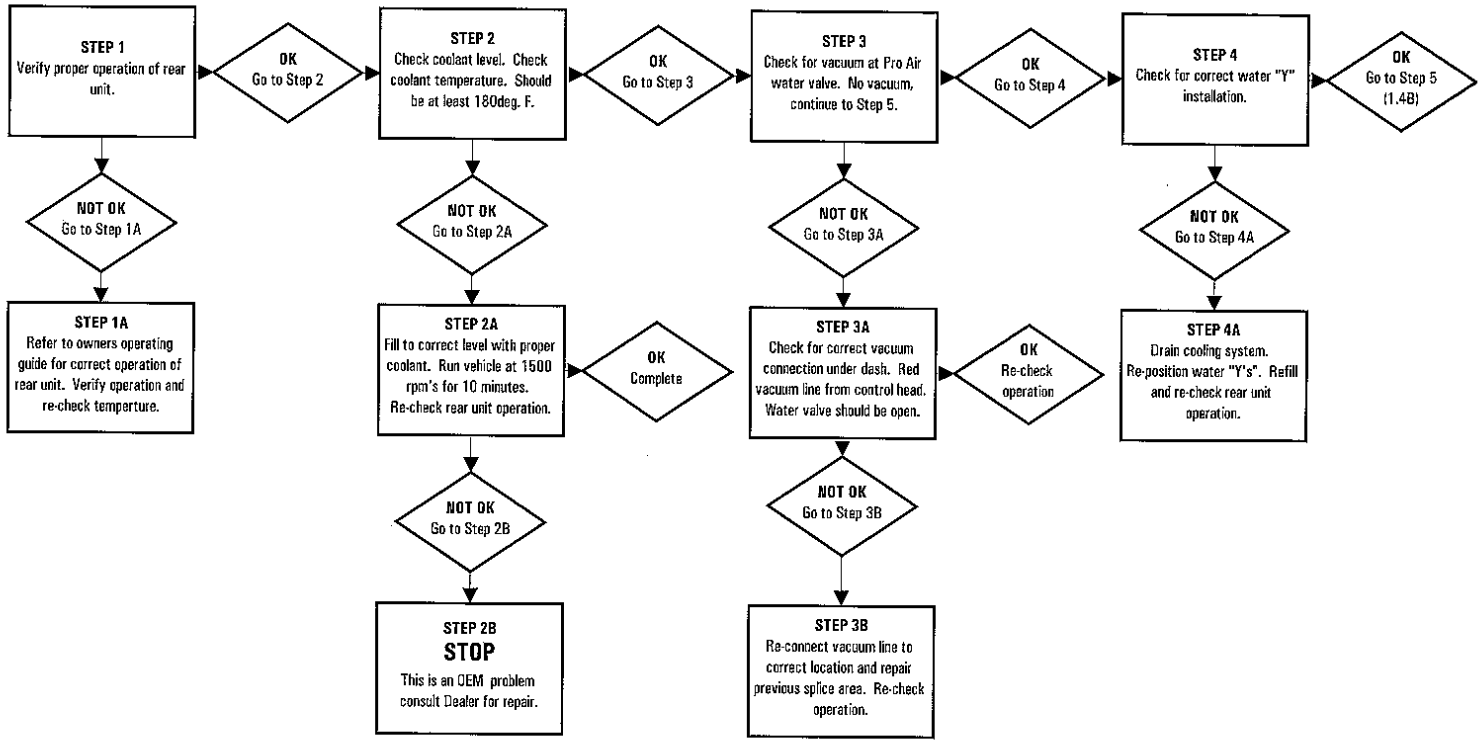
Chrysler/Dodge B-Van Diagnosis Flow Chart
Heat Concerns w/HBC


STEP 5
Check Pro Air water valve operation. Normally open.
OK
Go to Step 6
STEP 6
Check for kinked or pinched heater hose from Factory lines to Pro Air rear unit.
OK
Go to Step 7
STEP 7
Check auxiliary heater core for blockage.
OK
Go to Step 8
STEP 8
Call Pro Air Customer Service.
NOT OK
Go to Step 5A
NOT OK
Go to Step 6A
NOT OK
Go to Step 7A
STEP 5A
Remove water valve and check operation. Replace if flow is blocked with no vacuum present.
STEP 6A
Remove kink or pinch. Repair as necessary re-check operation.
STEP 7A
Replace plugged heater core re-check operation.

Chrysler/Dodge B-Van Diagnosis Flow Chart
Heat Concerns w/o HBC

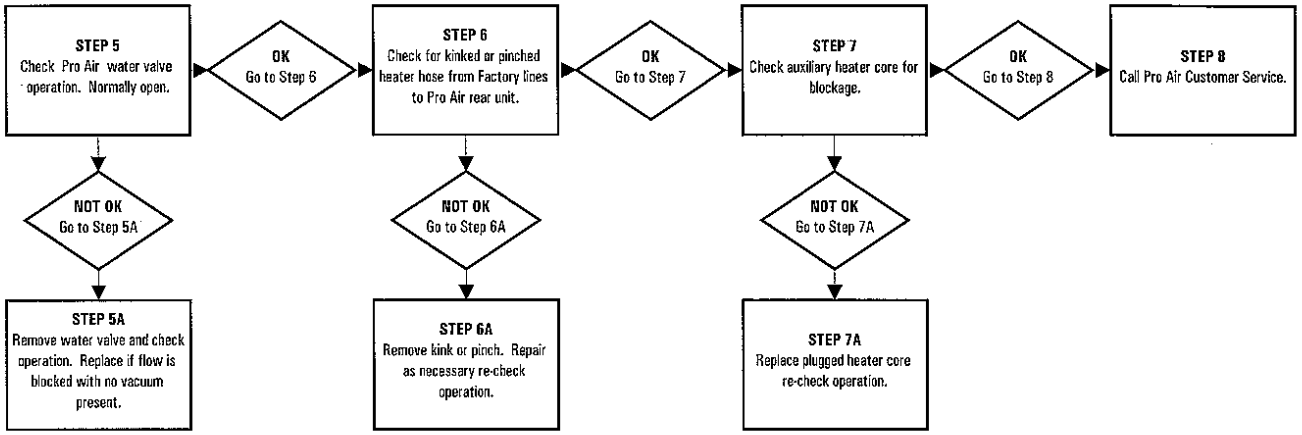
NOTES:

1) Heat temperatures should be checked at closest louver to Pro Air unit.
2) The rear unit fan speed should be set on "HIGH".
3) The vehicle should be fully warmed up for best results.
4) The vehicle should be running above idle when performing heat tests, 1200 to 1500 rpm's.
5) The vehicle's control head must be set on floor mode for correct water valve operation.


STEP 1
Verify proper operation of rear unit.
OK
Go to Step 2
STEP 2
Check coolant level. Check coolant temperature. Should be at least 180deg. F.
OK
Go to Step 3
STEP 3
Check for vacuum at Pro Air water valve. No vacuum, continue to Step 5.
OK
Go to Step 4
STEP 4
Check for correct water "Y" installation.
OK
Go to Step 5
(1.4B)
NOT OK
Go to Step 1A
NOT OK
Go to Step 2A
NOT OK
Go to Step 3A
NOT OK
Go to Step 4A
STEP 1A
Refer to owners operating guide for correct operation of rear unit. Verify operation and re-check temperture.
STEP 2A
Fill to correct level with proper coolant. Run vehicle at 1500 rpm's for 10 minutes. Re-check rear unit operation.
OK
Complete
STEP 3A
Check for correct vacuum connection under dash. Red vacuum line from control head. Water valve should be open.
OK
Re-check operation
STEP 4A
Drain cooling system. Re-position water "Y's". Refill and re-check rear unit operation.
NOT OK
Go to Step 2B
NOT OK
Go to Step 3B
STEP 2B
STOP
This is an OEM problem consult Dealer for repair.
STEP 3B
Re-connect vacuum line to correct location and repair previous splice area. Re-check operation.

PRO AIR, INC.

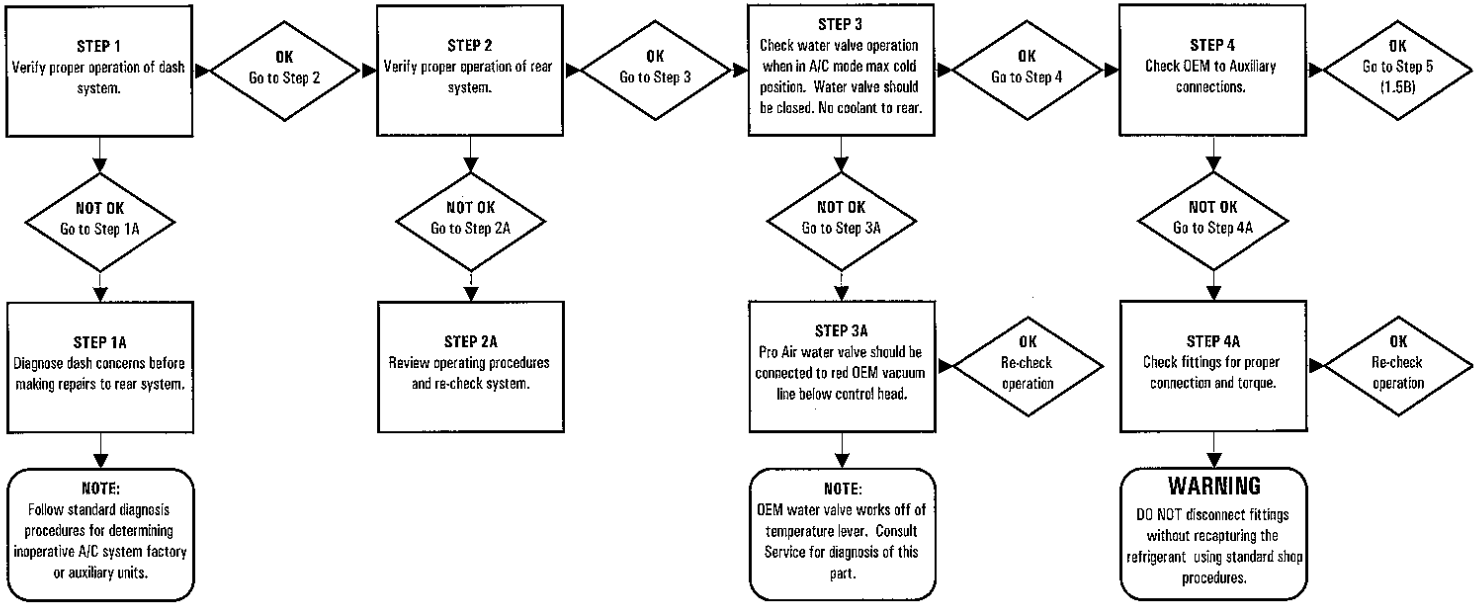
Chrysler/Dodge B-Van Diagnosis Flow Chart
Heat Concerns w/o HBC


STEP 5
Check Pro Air water valve operation. Normally open.
OK
Go to Step 6
STEP 6
Check for kinked or pinched heater hose from Factory lines to Pro Air rear unit.
OK
Go to Step 7
STEP 7
Check auxiliary heater core for blockage.
OK
Go to Step 8
STEP 8
Call Pro Air Customer Service.
NOT OK
Go to Step 5A
NOT OK
Go to Step 6A
NOT OK
Go to Step 7A
STEP 5A
Remove water valve and check operation. Replace if flow is blocked with no vacuum present.
STEP 6A
Remove kink or pinch. Repair as necessary re-check operation.
STEP 7A
Replace plugged heater core re-check operation.

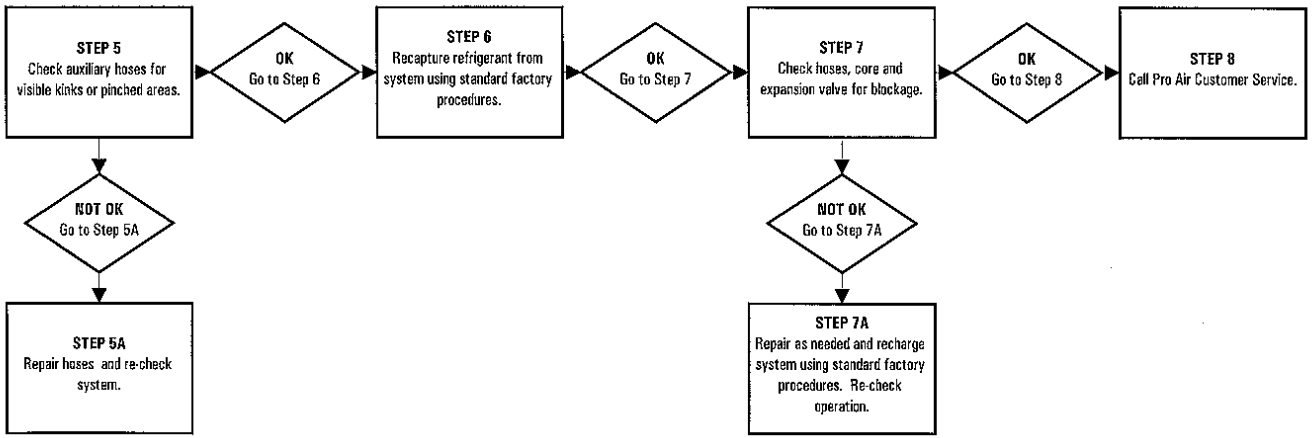
Chrysler/Dodge B-Van Diagnosis Flow Chart
Cooling Concerns w/ HBC

NOTES:

1) Keep in mind the rear units performance is dependant on a properly operating dash system.
2) A/C temperatures should be checked at closest louver to Pro Air unit.
3) The rear unit fan speed should be set on "MEDIUM".
4) The vehicle's control head A/C button should be depressed.
5) The vehicle's temperature control lever should be at the max cold position.
6) The vehicle should be running above idle when performing cooling tests, 1200 to 1500 rpm's.


STEP 1
Verify proper operation of dash system.
OK
Go to Step 2
STEP 2
Verify proper operation of rear system.
OK
Go to Step 3
STEP 3
Check water valve operation when in A/C mode max cold position. Water valve should be closed. No coolant to rear.
OK
Go to Step 4
STEP 4
Check OEM to Auxiliary connections.
OK
Go to Step 5 (1.5B)
NOT OK
Go to Step 1A
NOT OK
Go to Step 2A
NOT OK
Go to Step 3A
NOT OK
Go to Step 4A
STEP 1A
Diagnose dash concerns before making repairs to rear system.
STEP 2A
Review operating procedures and re-check system.
STEP 3A
Pro Air water valve should be connected to red OEM vacuum line below control head.
OK
Re-check operation
STEP 4A
Check fittings for proper connection and torque.
OK
Re-check operation
NOTE:
Follow standard diagnosis procedures for determining inoperative A/C system factory or auxiliary units.
NOTE:
OEM water valve works off of temperature lever. Consult Service for diagnosis of this part.
WARNING
DO NOT disconnect fittings without recapturing the refrigerant using standard shop procedures.

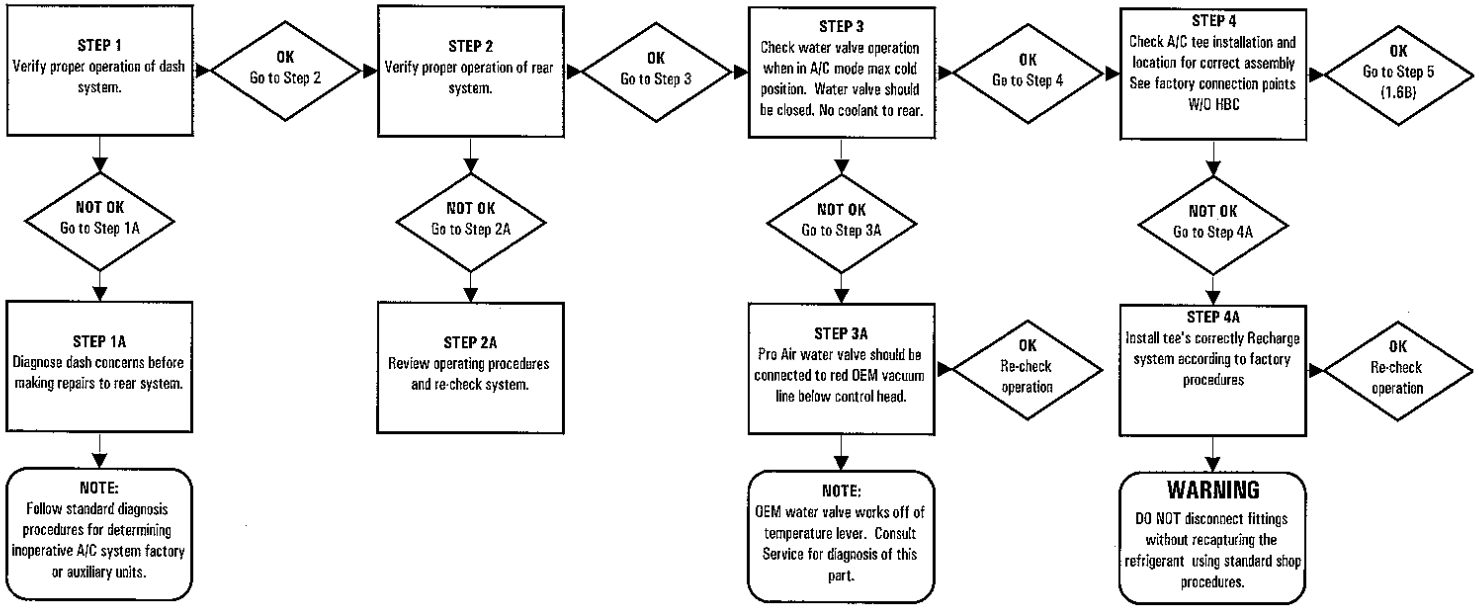
Chrysler/Dodge B-Van Diagnosis Flow Chart
Cooling Concerns w/HBC



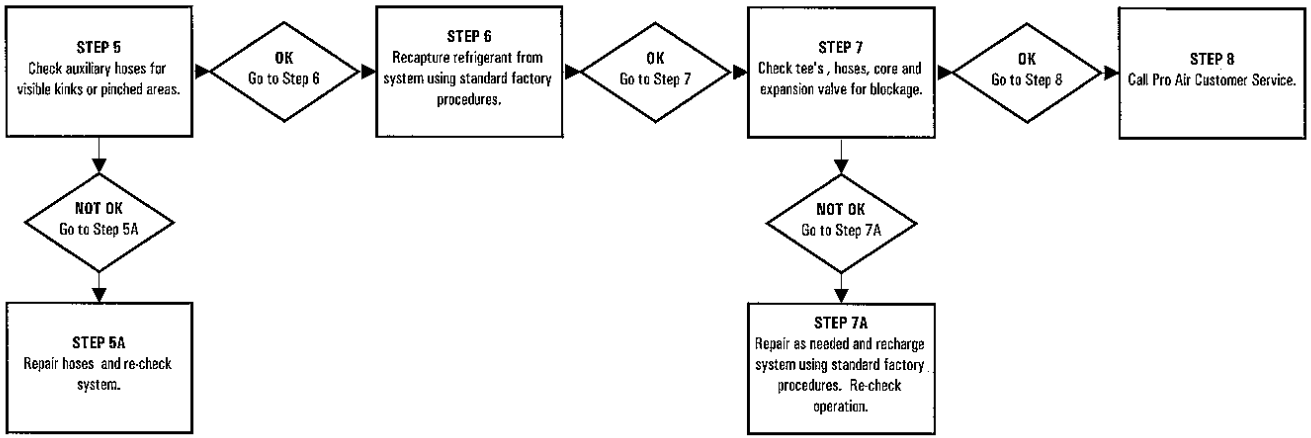
Chrysler/Dodge B-Van Diagnosis Flow Chart
Cooling Concerns w/o HBC

NOTES:

1) Keep in mind the rear units performance is dependant on a properly operating dash system.
2) A/C temperatures should be checked at closest louver to Pro Air unit.
3) The rear unit fan speed should be set on "MEDIUM".
4) The vehicle's control head A/C button should be depressed.
5) The vehicle's temperature control lever should be at the max cold position.
6) The vehicle should be running above idle when performing cooling tests, 1200 to 1500 rpm's.


STEP 1
Verify proper operation of dash system.
OK
Go to Step 2
STEP 2
Verify proper operation of rear system.
OK
Go to Step 3
STEP 3
Check water valve operation when in A/C mode max cold position. Water valve should be closed. No coolant to rear.
OK
Go to Step 4
STEP 4
Check A/C tee installation and location for correct assembly See factory connection points W/O HBC
OK
Go to Step 5 (1.6B)
NOT OK
Go to Step 1A
NOT OK
Go to Step 2A
NOT OK
Go to Step 3A
NOT OK
Go to Step 4A
STEP 1A
Diagnose dash concerns before making repairs to rear system.
STEP 2A
Review operating procedures and re-check system.
STEP 3A
Pro Air water valve should be connected to red OEM vacuum line below control head.
OK
Re-check operation
STEP 4A
Install tee's correctly Recharge system according to factory procedures
OK
Re-check operation
NOTE:
Follow standard diagnosis procedures for determining inoperative A/C system factory or auxiliary units.
NOTE:
OEM water valve works off of temperature lever. Consult Service for diagnosis of this part.
WARNING
DO NOT disconnect fittings without recapturing the refrigerant using standard shop procedures.

Chrysler/Dodge B-Van Diagnosis Flow Chart
Cooling Concerns w/o HBC


STEP 5
Check auxiliary hoses for visible kinks or pinched areas.
OK
Go to Step 6
STEP 6
Recapture refrigerant from system using standard factory procedures.
OK
Go to Step 7
STEP 7
Check tee's, hoses, core and expansion valve for blockage.
OK
Go to Step 8
STEP 8
Call Pro Air Customer Service.
NOT OK
Go to Step 5A
STEP 5A
Repair hoses and re-check system.
NOT OK
Go to Step 7A
STEP 7A
Repair as needed and recharge system using standard factory procedures. Re-check operation.

Chrysler/Dodge B-van Electrical Concerns (With or Without HBC)

Chrysler vans utilize two harnesses supplied by Pro Air: (1) a main harness routed from the auxiliary-switch location to the rear unit; and (2) a blower motor resistor harness attached directly to the unit. This second harness also connects to the main harness with a three-cavity molded plug.

The electrical system on Chrysler vans uses a 12-volt (DC) signal. This means that the dash switch send 12-volt signals to the rear unit in order to switch blower speeds.

When starting diagnosis of the electrical concern, begin by accessing the auxiliary fan switch and check for ignition power on the pink wire at the back of the switch.

You must have this ignition source for the rear blower to operate. (This source is located in the Mark III Smart Block.) For any problems with this circuit, consult Mark III customer service department for location and diagnosis.

Chrysler/Dodge B-van
Airflow Concerns

The first step in diagnosing any concern is to get as specific as possible with it. In order to help prevent misdiagnosis and ineffective, costly repairs, categorize the airflow concern into one of the following general areas:

Inadequate airflow—front or rear louvers

Inadequate airflow—left or right louvers

Inadequate airflow—all louvers

The following prechecks will help in diagnosis of the airflow concern:

Precheck	**Solution**
Is air inlet blocked?	Remove debris or obstruction.
Is blower inoperative on low, medium, and/or high?	Refer to electrical concerns section for specific chassis.
Is blower wheel not intact?	Refer to blower replacement in repair section.
Is evaporator core iced up?	Refer to cooling concerns section for specific chassis.
Is there debris on blower wheel or coil?	Clean and prevent reoccurrence.
Is there inadequate airflow out of top of unit with duct disconnected?	Check for blocked inlet. Check for debris on core. Check for blower concern.

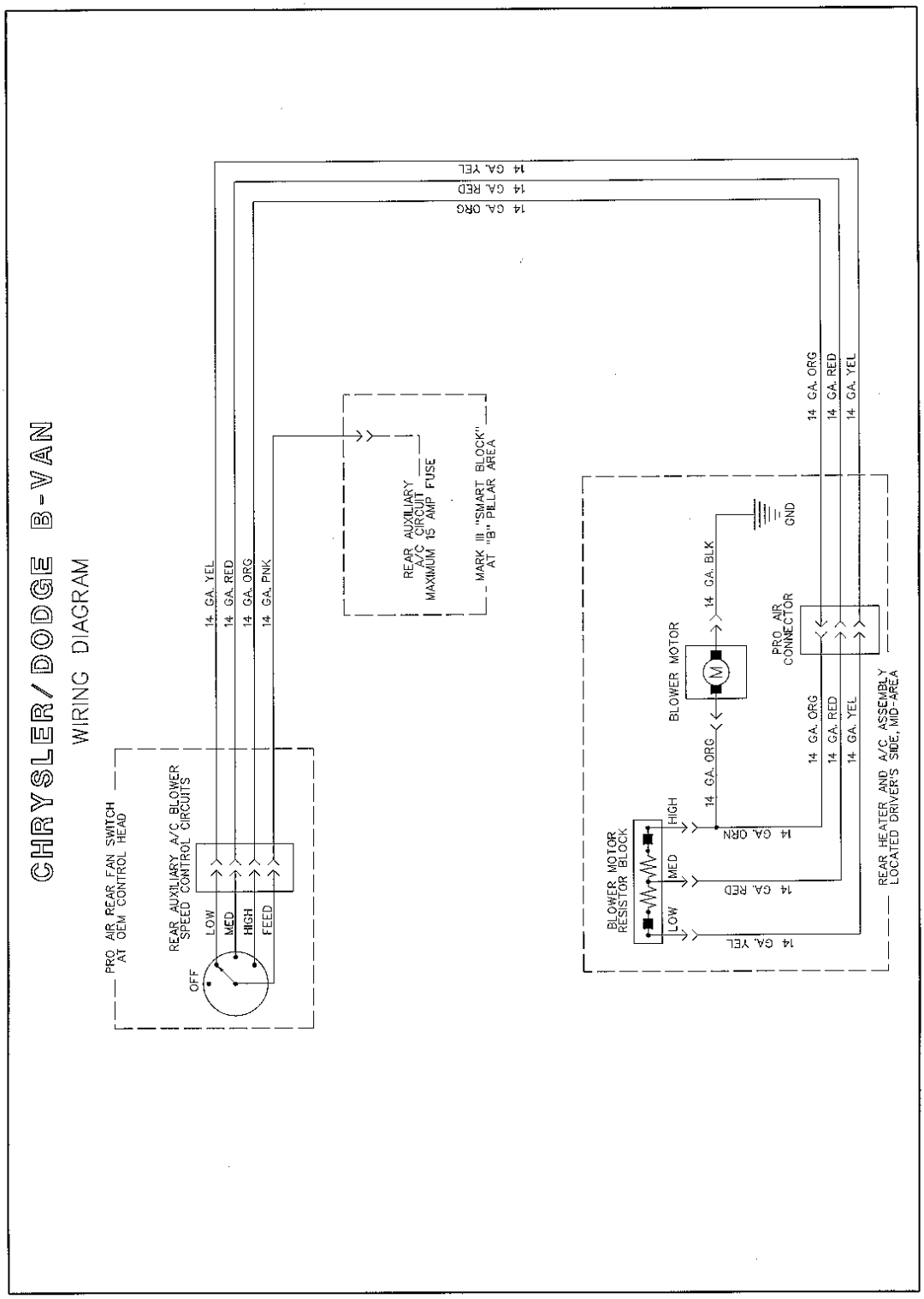
If any problems exist with these prechecks, they must be rectified before removing interior panels to check the ductwork. Repair procedures for the above concerns can be found in the specific chassis sections of this manual.

If all the above prechecks are all right, then check all louvers for obstructions: fabric, tape, hole cutouts, etc. If louvers are unobstructed, it will be necessary to access duct hose, crossover, and wall extensions to determine the cause of the inadequate airflow.

Consult Mark III customer service department for procedures to access these components.

Chrysler/Dodge B-van
Electrical Concerns—Test Procedures
(With or Without HBC)

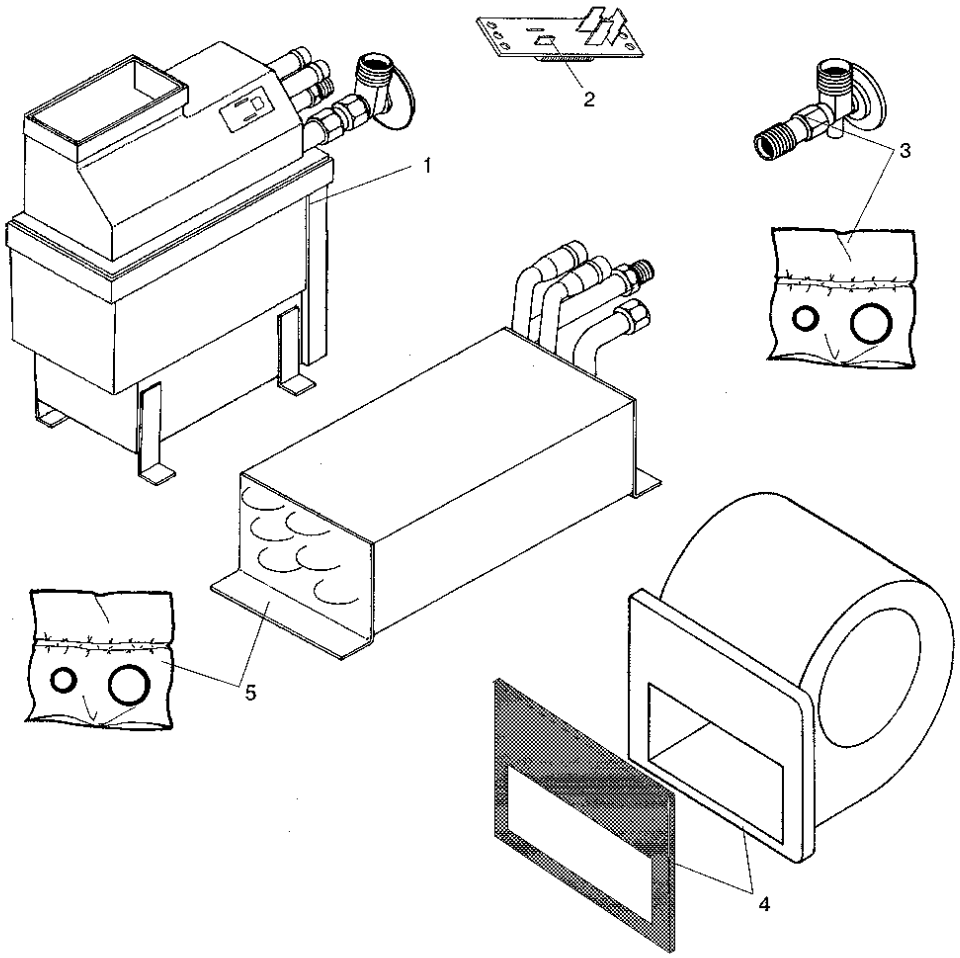
Concern	Possible Cause	Solution
No Blower Speeds	1. No ignition source to switch (check fuse)	1. Mark III–supplied location at Smart Block. Consult Mark III.
	2. Inoperative switch	2. Replace switch.
	3. Switch disconnected from harness	3. Reconnect and secure to prevent reoccurrence.
	4. Main harness disconnected from resistor harness	4. Reconnect and secure to prevent reoccurrence.
	5. Motor unplugged	5. Reconnect and secure to prevent reoccurrence.
	6. No ground to motor	6. Reground unit.
	7. Inoperative motor	7. Replace motor.
No Low Speed	1. Inoperative switch	1. Replace switch.
	2. Open connection or circuit in yellow wire from dash to rear unit	2. Check circuit. Repair or replace harness.
	3. Inoperative resistor	3. Replace resistor.
No Medium Speed	1. Inoperative switch	1. Replace switch.
	2. Open connection or circuit in red wire from dash to rear unit	2. Check circuit. Repair or replace harness.
	3. Inoperative resistor	3. Replace resistor.
No High Speed	1. Inoperative switch	1. Replace switch.
	2. Open connection or circuit in orange wire from dash to rear unit	2. Check circuit. Repair or replace harness.
Motor Runs Continuously	1. Pink ignition feed connected to battery source	1. Mark III–supplied location. Consult Mark III.
Mismatched Blower Speeds	1. Incorrectly wired harness (wires to OEM motor harness or resistor plug)	1. Replace affected harness or repin connectors according to wiring diagram.


CHRYSLER/DODGE B-VAN
WIRING DIAGRAM
PRO AIR REAR FAN SWITCH
AT OEM CONTROL HEAD
REAR AUXILIARY A/C BLOWER
SPEED CONTROL CIRCUITS
OFF
LOW
MED
HIGH
FEED
14 GA. YEL
14 GA. RED
14 GA. ORG
14 GA. PNK
REAR AUXILIARY
A/C CIRCUIT
MAXIMUM 15 AMP FUSE
MARK III "SMART BLOCK"
AT "B" PILLAR AREA
14 GA. YEL
14 GA. RED
14 GA. ORG
BLOWER MOTOR
RESISTOR BLOCK
LOW
MED
HIGH
14 GA. BLK
GND
PRO AIR
CONNECTOR
REAR HEATER AND A/C ASSEMBLY
LOCATED DRIVER'S SIDE, MID-AREA
PRO AIR, INC.

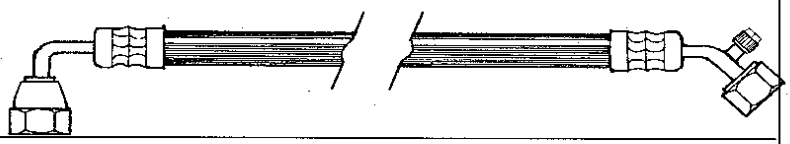
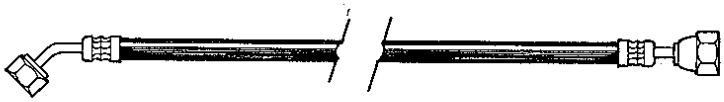
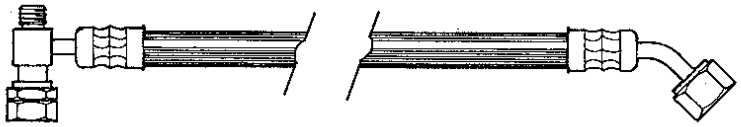
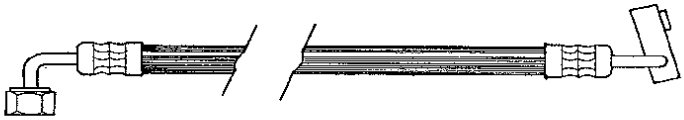
PROAIR inc.

CUSTOMER SERVICE MANUAL

1997 CHRYSLER/DODGE B-VAN POWER PACK ASSEMBLY
PART NUMBER 60 000 816



1. 60 000 816 Power pack ass'y	
2. 01 000 091 Resistor	5. 03 000 037 Coil, heat/cool
3. 05 000 107 Expansion valve 60 000 287 O-ring kit	60 000 287 O-ring kit
4. 11 000 074 Blower motor 08 000 041 Seal, blower	

CUSTOMER SERVICE MANUAL	
60 000 817 Dodge w/HBC Suction Line	
60 000 818 Dodge w/HBC Liquid Line	
60 000 833 Dodge w/o HBC Suction Line	
60 000 834 Dodge w/o HBC Liquid Line	
60 000 711 Heater hose, 5/8 I.D. w/w o HBC	
	PRO AIR, INC.

REMOVE AND REPLACE INSTRUCTIONS

POWER PACK

REMOVAL

1. Connect a refrigerant recapturing / recycling machine to the service valves and recapture the refrigerant from the system according to factory procedures

2. Disconnect the wire harness connectors to the blower motor, resistor, and unscrew the relays.

3. Disconnect the suction hose with a 7/8" open end wrench on the hose fitting and a 1 1/16" open end wrench as a backup on the coil fitting.

4. Disconnect the liquid hose with a 5/8" open end wrench on the hose fitting and a 3/4" open end wrench on the thermal expansion valve as a back up.

5. Loosen the radiator cap to relieve pressure on the system.

7. Clamp the hoses off and loosen the worm gear clamps at the heater hoses and remove the hoses.

5. Remove the screws holding the duct adapter to the case lid, and the screws holding the mounting brackets to the floor and the wall.

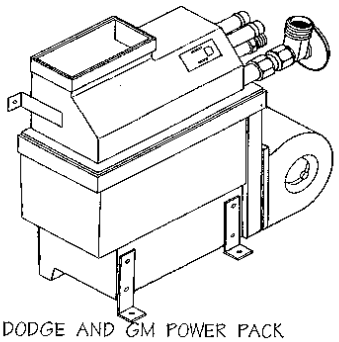
7. Remove the power pack.

REPLACEMENT

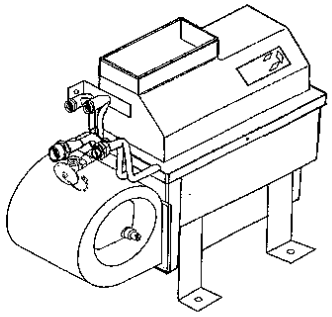
1. Reverse the above procedure.

2. When re-connecting the hoses, torque the suction hose to 20 ft/lbs. and the liquid hose to 12 ft/lbs and the heater hose clamps to 30 in/lbs.

3. Be sure to put the proper amounts of Pag Oil and R134a refrigerant back into the system.



DODGE AND GM POWER PACK



FORD POWER PACK

REMOVE AND REPLACE INSTRUCTIONS

COIL

REMOVE

1. Connect a refrigerant recapturing / recycling machine to the service valves and recapture the refrigerant from the system according to factory procedures.

2. Remove the screws attaching the duct adapter to the case lid.

3. Remove the refrigerant tape around the coil fittings at the hoses.

4. Disconnect the liquid hose with 5/8" open end wrench and a 3/4" open end wrench.

5. Disconnect the suction hose with a 7/8" open end wrench on the hose fitting and a 1 1/16" wrench on the coil fitting.

6. Loosen the worm gear clamps from the heater hoses and remove the heater hoses.

7. Remove the screw the fastens the case lid bracket to the wall.

8. Disconnect the wire harness from the resistor and unscrew the relays at the lid.

9. Remove the screws, (6) attaching the case lid to the case bottom and remove the lid.

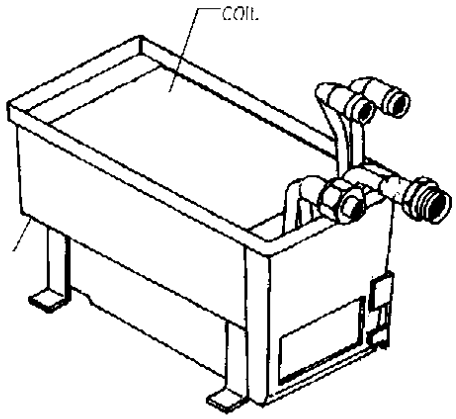
10. Remove the single screw through the case into the coil flange at the opposite end from the blower.

11. Remove the coil from the case bottom.

REPLACE

1. Reverse the above procedure.

2. Recharge the system according to factory procedures with the correct amounts of Pag Oil and R-134a refrigerant.



REMOVE AND REPLACE INSTRUCTIONS

BLOWER MOTOR

REMOVE

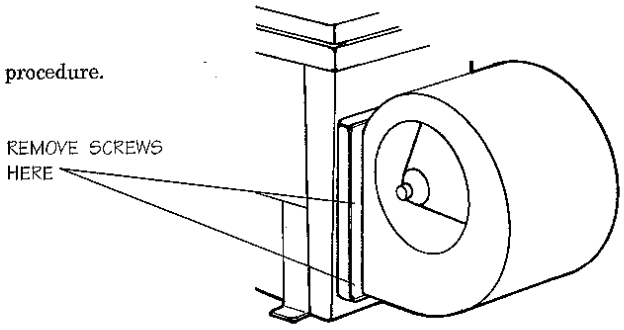
1. Disconnect the wire harness at the motor plug.

2. Remove the two phillips drive screws through the left side of the motor flange into the case.

3. Slide the motor out from the support bracket on the right side.

REPLACE

1. Reverse the above procedure.



RESISTOR

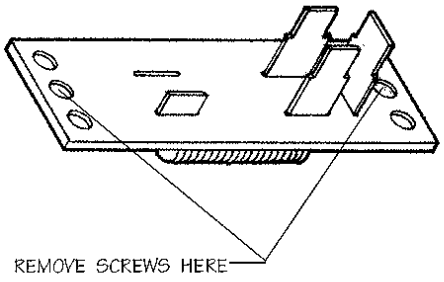
REMOVE

1. Disconnect the wire harness plug from the resistor.

2. Remove the two screws holding the resistor to the case lid.

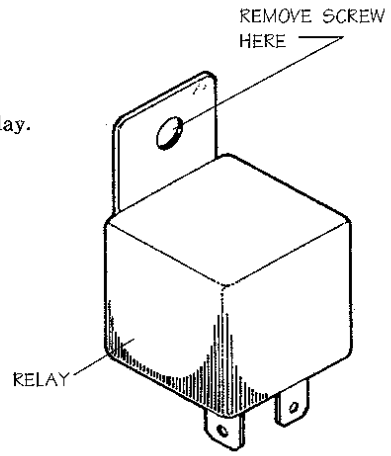
REPLACE

1. Reverse the above procedure.



REMOVE AND REPLACE INSTRUCTIONS

RELAY



REMOVE

1. Disconect the wire harness plug from the relay.

2. Remove the phillips screw from the relay.

3. Remove the relay.

REPLACE

1. Reverse the above procedure.

THERMAL EXPANSION VALVE

REMOVE

1. Connect a refrigerant recapturing / recycling machine to the service valves and recover the refrigrant from the system according to factory procedures.

2. Remove the refrigerant tape covering the expansion valve and coil fitting.

3. Disconnect the liquid hose from the expansion valve with a 5/8" open end wrench at the valve and a 3/4" open end wrench at the hose fitting.

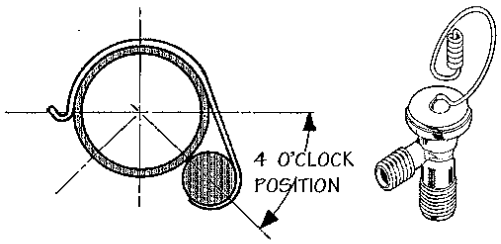
4. Remove the bulb clamp from the coil suction tube.

5. Disconnect the expansion valve from the coil with a 5/8" open end wrench and a 7/8" open end wrench.

REPLACE

1. Reverse the above procedure.

2. Orientation of the bulb clamp on the suction tube is critical. Place the bulb at the four o'clock position, as viewed from the end of the tube, as shown.



REMOVE AND REPLACE INSTRUCTIONS

HEATER HOSE

REMOVE

1. Loosen the radiator cap to relieve pressure on the system.

2. Position a catch basin under the OEM heater hose connection point to contain the anti-freeze solution.

3. Loosen the worm gear clamp at the OEM connection point and pull the end of the hose off to drain the lines..

4. Loosen or remove any linestakes.

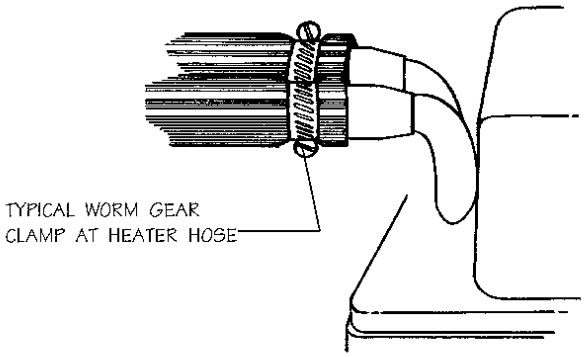
5. Loosen the worm gear clamp on the hoses at the power pack and remove the hose.

REPLACE

1. Reverse the above procedure.

2. Tighten the hose clamps to 30 in/lbs.

3. Re-silicone around the heater hose at the floor grommet.



REMOVE AND REPLACE INSTRUCTIONS

REFRIGERANT HOSE

REMOVAL

1. Connect a refrigerant recycling machine to the service ports and recapture the refrigerant according to factory procedures.

2. Remove the refrigerant tape from around the hose fitting at the evaporator.

3. Mark the locations of the ty-raps, (for later replacement), and remove.

4. Loosen the screws at the linestakes.

5. Using a primary and a back up wrench, disconnect the hose at the evaporator and at the OEM connection point.

6. Remove the hose.

REPLACEMENT

1. Reverse the above procedure.

2. Suction hose fittings, (1/2"), must be torqued to 20 ft/lbs. and liquid hose fittings, (5/16"), must be torqued to 12 ft/lbs.

3. Be sure and replace all ty-raps and tighten all linestakes to prevent hoses chafing or sagging.

Table of Contents

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2. Micro Drive Retrofit Procedure for Power Drive ---------- 138
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4. Power Slider Upper Glass Track ---------- 139
5. Leak Detection and Repair ---------- 139
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8. Slider Window Motor and Cable Removal ---------- 140
9. Window Removal ---------- 140

Trouble Shooting Guide
Rear Slider Window

With this troubleshooting guide a technician's responsibility is to:

1. Determine if there is power to the motor so it operates both directions **(check fuse and switch if there is no power)**
2. Check the upper and lower channels the glass slides in for obstructions, or pinching the upper track **(trim interference).** The track is easily removed to check operation.
3. Replace a drive system and/or upper track to repair a malfunctioning window.
4. On Ford and Dakota pickup trucks, be able to identify whether the Powerslider is a **gasket or glue-in** installation.
5. Utilize the leak repair procedure if needed.

We do not require your technicians to disassemble drives and replace individual components, as the complete drive is easily changes. 1992 - 1994 models require reattaching the cable to the glass with rear-view mirror adhesive (included with drive kit) and 1995 - 1996 models feature a quick disconnect system allowing very easy replacement.

Micro Drive
Trouble Shooting / Replacement

☛ **Note**

These procedures are for windows manufactured with the micro drive system,

Not for retrofitting an earlier drive system.

☛ **Note**

Before exchanging a drive unit make sure you have checked power supply connections at the motor, switch, ground, and **check 20-amp fuse.**

☛ **Note**

If the window only operates in one direction, check the switch with a test light.

☛ **Note**

If the motor runs, but the glass does not move, check to see of the attachment clip is bonded to the glass.

1. Open Window - Cable connector must be past split in drive tube. Remove from attachment clip. If there is binding assist by hand or remove motor to push open.
2. Remove screw from drive tube.
3. Slide drive tube section to expose attachment clip.
4. Release cable connector from attachment clip.
5. Pull cable-retaining clip from the drive tube. Insert a paper clip etc. In hole to prevent losing clip.
6. Slide cable out of drive tube.
7. Slide cable by hand to verify glass slides freely.
8. If glass slides freely, remove drive unit from truck and install new drive unit.
9. If glass is binding or difficult to move by hand, inspect upper and lower tracks for interference. Replace upper track if necessary, and correct trim interference if pushing on upper track.
10. Drive unit is installed in reverse order.

Micro Drive Retrofit Procedure For Power Drive

Note

These procedures are for installing a micro drive replacement drive on a window manufactured with the older drive. **Before 9/94**

Note

To replace a drive unit, you need rear view mirror adhesive **(Loctite No. 11067)** and alcohol to clean the bonding surfaces properly.

Note

Before replacing - have you checked for power? Check connections at the motor, switch, ground and **check 20amp fuse.**

Note

Inspect upper track for interference from interior trim. If present, this must be corrected.

Old Drive System Removal/ Replacement with Micro Drive

Note

Before beginning inspect your replacement drive to make sure it has the threaded drive tube fitting!

Note

If the glass clip is already detached from the glass, that may be the problem. Reattach and Test

The cable assembly must be detached from the window by removing the bonded glass clip from the sliding glass panel.

1. Mark the position of the glass clip with a piece of tape. The position is important. Mark on the outside of the glass.
2. Tap a razor between the glass and glass clip to release the clip. Be careful not to scratch the glass.
3. Unscrew threaded drive tube fitting from the drive tube (where the cable meets window) and slide cable out.
4. Remove mounting screws and cable clamps. Then take the drive unit out of the vehicle.
5. Insert the glass clip into the slotted cable end of the new drive unit. Slide the cable and clip into the drive tube. Clean the clip thoroughly with alcohol before installing.
6. Thread the fitting into the drive tube.
7. Slide the glass to the proper location to line up the clip correctly with the tape mark.
8. Clean the glass and clip with alcohol. Apply a thin coat of loctite primer and let dry. (5 minutes or more in cold temperatures).
9. Apply a thin even coat of adhesive, and bond the clip to the glass. Hold for 30 seconds.

Note

In cold weather it may help to warm the glass and clip with a heat gun.

10. After 30 minutes, check operation of window.

Powerslider Upper Glass Track

Note

To determine if the upper track is defective, remove the track and run the window. If it does not operate normally there is another problem.

Note

This procedure does not require window removal

Note

If you replace the upper track on an EPS880 Chevy/GMC, or EPS950 Ford glue in Powerslider, make sure the interior trim does not push against the upper track. This will collapse the track and can damage the drive unit. Install spacer blocks, loosen, or modify the trim so it does not interfere.

1. With the glass in the open position, use pliers to pull the upper glass track out of the window frame, slide the track out from over the top of the sliding glass.
2. Place the replacement track angled end into the window frame just in front of the sliding glass. You will notice that the weather striping of the track is looped around the square end cut of the track. Place your finger over the loop of the weather strip while you slide the replacement track into the frame and over the top of the sliding track.
3. Once the replacement track is in position, snap the track into the frame channel. Be sure the track is flush to the vertical frame post and is snapped into the full depth of the window channel. The glass track must be open for free movement of the sliding glass, with no interference from the vehicle trim.

Leak Detection and Repair

General information

- Leaks should be fixed without removing the window (except gasket installation leaks).
- Water and air leaks are handled the same.
- You must determine the cause of the leak to make the proper repair.
  Leak types:
  1. Installation - sealant leaks/ poorly installed gasket
  2. Window seals/ Baffles - miscut or missing seals, missing or poorly aligned baffles (water usually over flows inside the channel)
  3. Truck body seams/cargo lights - poorly sealed roof seams, poorly installed cargo lights (usually leaks from top corners or light)
- Run water over the top of the window frame to test for sealant leaks (1 - 2 minutes).
- If you cannot see a leak, apply soapy water around the window area and turn on the A/C or fan on high and look for bubbles to form outside (normal around weep holes).
- It is normal for some water to enter the bottom channel of a sliding window. They are designed to drain water - out.
- If water enters faster than it can drain there is likely a defective or missing seal on the window.

Sealant Leaks Encapsulated Windows

You can seal the entire window by masking off the window frame and body, and applying a thin bead of sealant there. Smooth with a wet finger and remove tape for a clean finish. (Recommend black silicone).
Leaking urethane sealant may have been applied incorrectly, or “blown out” by slamming doors when still wet.
Interior trim. May have to be pulled back or loosened to locate and repair leak.
Locate leak and fill hole from inside with urethane or silicone. Use a small tip and a small screw driver or awl etc. To spread sealant around and push into hole.

Window and Seal Leaks

Mullion Replacement

1. Remove Exterior Weather-strip (top and bottom)
2. Use a block of wood - tap mullion off glass.
3. Line up glazing channel and press mullion on.

Note

Frame/mullion joint - small gaps can be filled with black silicone or butyl.

Mullions are replaceable complete with seals (press fit).

- Inspect all corners to make sure weather stripping runs full length.
- Make sure weather strip is in contact with glass.

Exterior weather strip - top and bottom of window opening. If missing too much water can enter channel.

Pickup
Power Slider Window

Slider window

Motor and cable removal:

1. Slide window to full open position
2. Unplug slider motor, (Located behind rear seat) remove motor mounting screws (Philip head)
3. Remove cable mounting clips (2) attaching cable to wall
4. Remove “c” clip from passenger cable rail
5. Remove Philip head screw from driver side end of window rail, lift up on rail end and remove (exposes window clip)
6. Remove cable from window clip
7. Remove cable from track by pulling.

Window removal:

1. Leave cable in track
2. Remove factory window shroud located inside vehicle
3. Remove up to 8 window retaining clips
4. Remove gasket by inserting a flat tool from the inside and push outward all along the edges to remove
5. Grasp window from outside and remove

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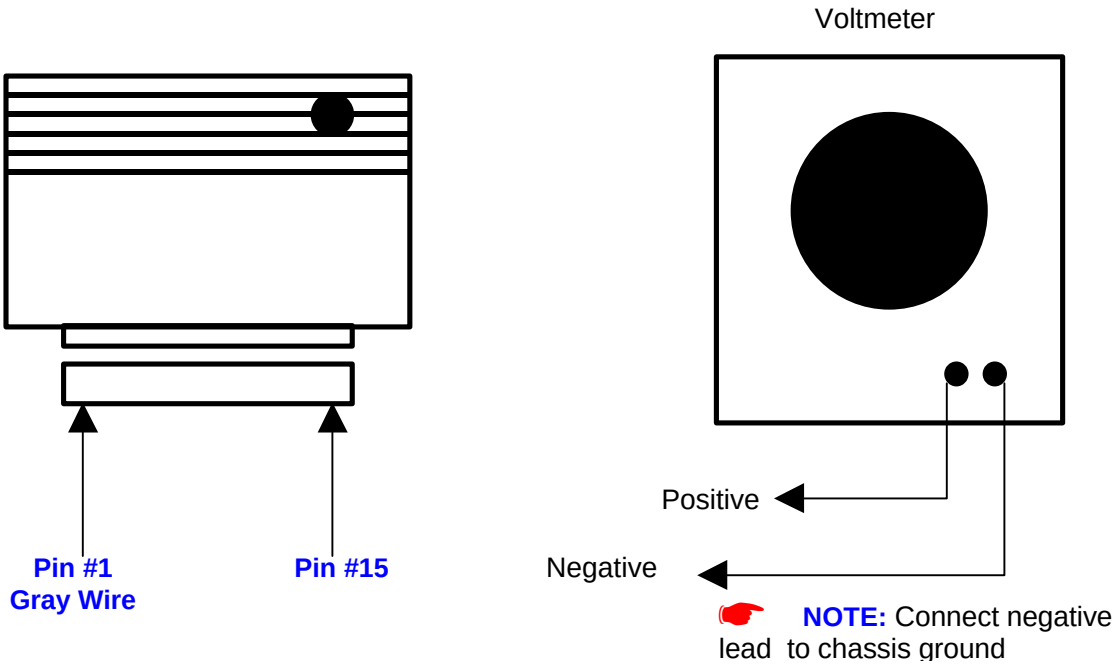
Custom Security Systems Trouble Shooting Guide

1. Trouble Shooting ----------142

Trouble Shooting Guide For
Mark III Custom Security Systems
By Rostra



PIN #	FUNCTION	CORRECT VOLT/ OHM READING
1	Valet Switch	**Position 1** - Very low (near zero) ohm reading - indicates continuity to ground **Position 2** - Infinite ohm reading - indicates open to ground * The valet switch should be in position 2 for normal security operation.
2	Door Pin Switch	**Door closed** - 12 volts **Door open** - 0 volts
3	Automatic Door Lock	Brake pedal **NOT** depressed - 0 volts Brake pedal depressed - 12 volts
4	Accessory Power	**Key off** - 0 volts **Key on** - 12 volts
7	Ground	At **ALL** times - near **zero** ohm reading
8	Door Lock	Use test jumper - connect to ground, touch pin, **door should lock**
9	Door Unlock	Use test jumper - connect to ground, touch pin, **door should unlock**
10	Constant 12 Volts	At **ALL** times - **12 volts**
11	Horn	Horn **NOT** depressed - **infinite ohms reading** Horn depressed - **very low (near zero) ohm reading**
14	Parking Lights	Parking lights off - 0 volts Parking Lights on - 12 volts

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Running Boards

1. Running Board Removal/Installation ----------144

Running Board Removal/installation

Removal

Remove self-tapping screws that secure fender flare to body. Remove fender flare.
Remove self-tapping screws that secure running board to body.
Remove step treads PAL nuts.
Remove step tread and running board.
Remove excess tape from body and clean running board and fender flare surfaces with alcohol.

Note: Do not remove the metal support brackets from the frame. This is a critical alignment area. Only remove the running boards from the support brackets. This will ensure replacement running boards are properly aligned to the body panels.

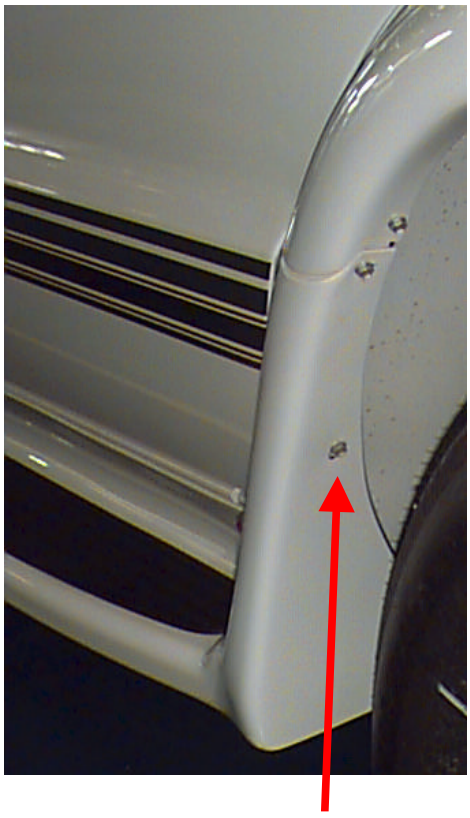
Installation

Remove excess tape from rocker panel and clean rocker panel mounting surface with alcohol.

Peel off approximately 2-3” of tape red plastic backing at each end of the running board and allow to hang over the side as shown.

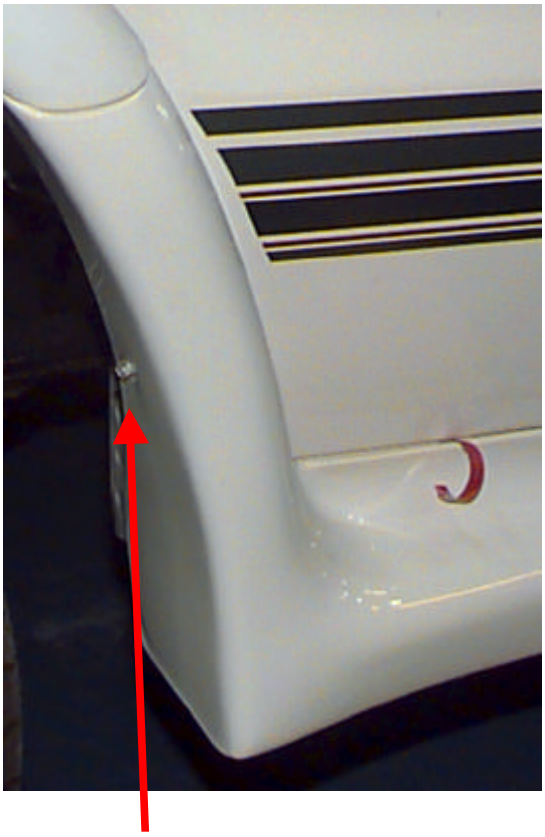
Position running board on support bracket ensuring a tight fit to van body.

Install step tread ensuring the pegs fit correctly through holes in both running board and supports bracket. Secure step thread with 3/16” PAL nuts.



Drill through holes in front running board section using self-tapping screws.

Ensure running board is mounted flush to rocker panel.



Drill through holes in rear running board section using self-tapping screws.

Ensure running board is mounted flush to rocker panel.

Check alignment of running board then peel away red plastic backing and attach running board to side of vehicle.

Position front and/or rear wheel flare on wheel well and attach by drilling through flare with self-tapping screws.

Ensure fender flare is mounted flush to body panel.

1997/1998 Parts Manual

Version 97/98.1.0.Chrysler 7/1/98

1997/1998 Chrysler Parts Manual

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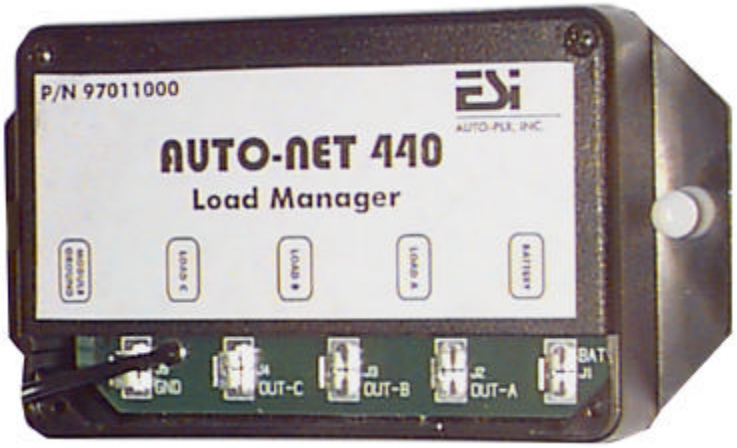
-	-	Cupholder, flip out	14800160	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	A/C Vent	1444210 CS	4

Model	Item No.	Part Description	Part No.	Quantity
All	-	Air Compressor – 12V	13400200	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Alarm Transmitter	13220385	2

Model	Item No.	Part Description	Part No.	Quantity
Astro	-	Auto-Net 230 Dual Sofa Controller	13260159	1



Model	Item No.	Part Description	Part No.	Quantity
Astro	-	Auto-Net 440 Load Manager	13260157	1

Model	Item No.	Part Description	Part No.	Quantity
LX	-	Center Beam Molded, LX Model, Full Size Van	CS	1

Model	Item No.	Part Description	Part No.	Quantity
SE	-	Center beam molded, SE model without rear air – satin finish	CS	1
LE	-	Center beam molded, LE model without rear air – gloss finish	CS	1

Model	Item No.	Part Description	Part No.	Quantity
Dodge SWB	-	Center Beam Dodge SWB Sport Top and Low Top Without Rear Air	13761700	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	CD player Blaupunkt main unit - #CDRF6ir	13200450	1

Model	Item No.	Part Description	Part No.	Quantity
All	1	CD Player Cartridge	13200450-3	1
All	2	CD Player Wireless Remote	13200450-2	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	CD Player Wired Remote	13200450	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	CD Player FM Modulator	13200450-1	1

Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Thermotronics Cupholder	CS	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Cupholder, folding	14800120	1

Model	Item No.	Part Description	Part No.	Quantity
-	-	DC Outlet	14100131	1

Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Dodge Door Panel	CS	1

Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Dodge Door Panel	CS	1

Model	Item No.	Part Description	Part No.	Quantity
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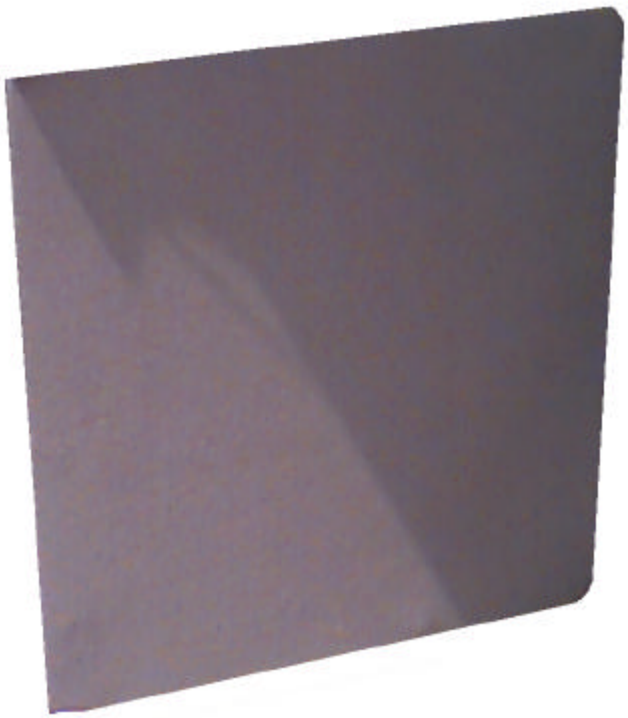
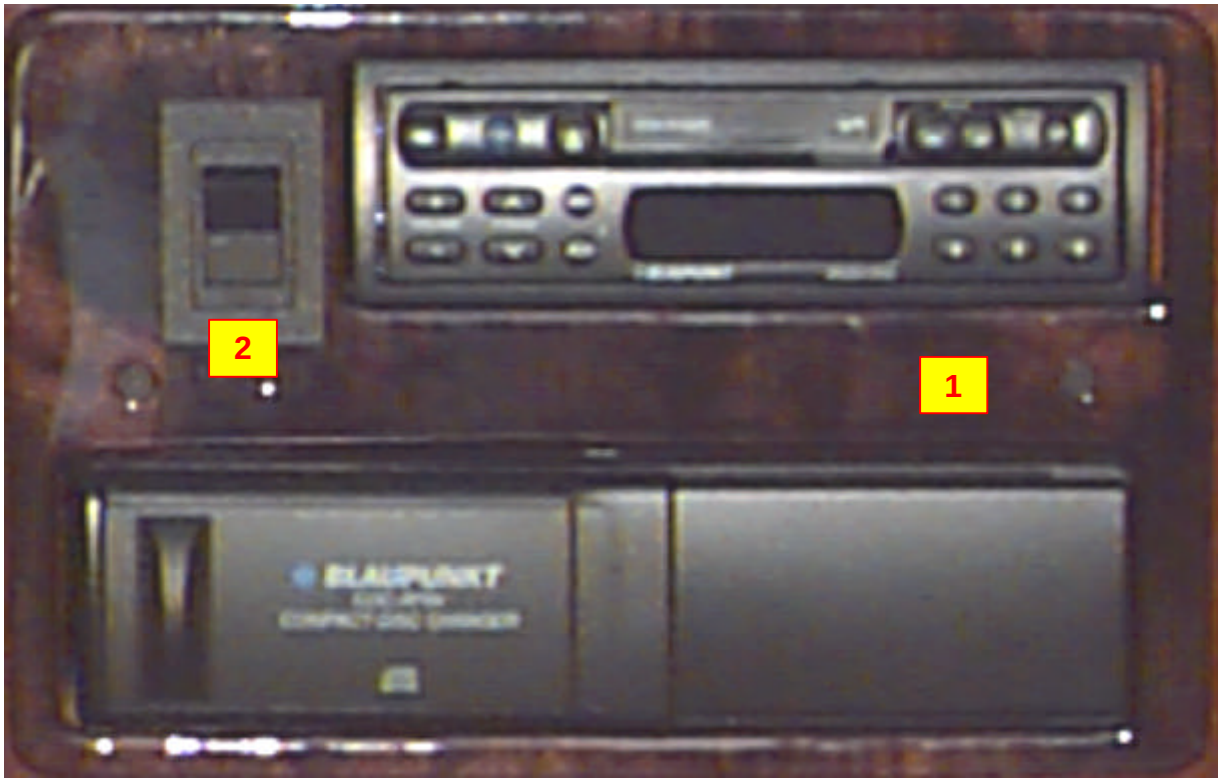
Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Dodge Door Panel	CS	1

Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Dodge Door Panel	CS	1



Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Dodge Door Panel	CS	1

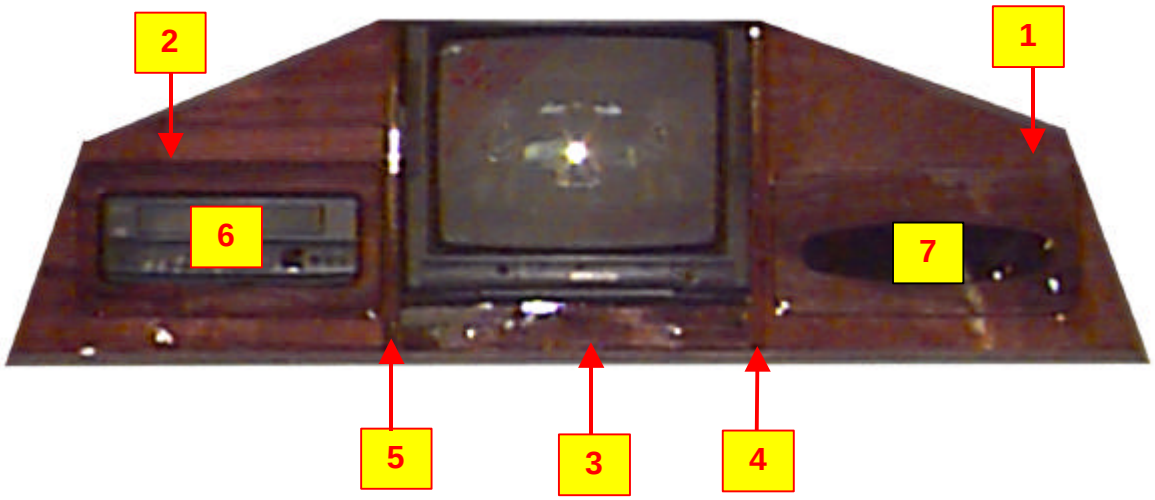
Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Dodge Door Panel	CS	1



Model	Item No.	Part Description	Part No.	Quantity
G-Van	1	Trim Ring, Deluxe Wall (Radio/CD Player)	13771433	1
G-Van	1	Switch, Mute, Speaker	13260170	1

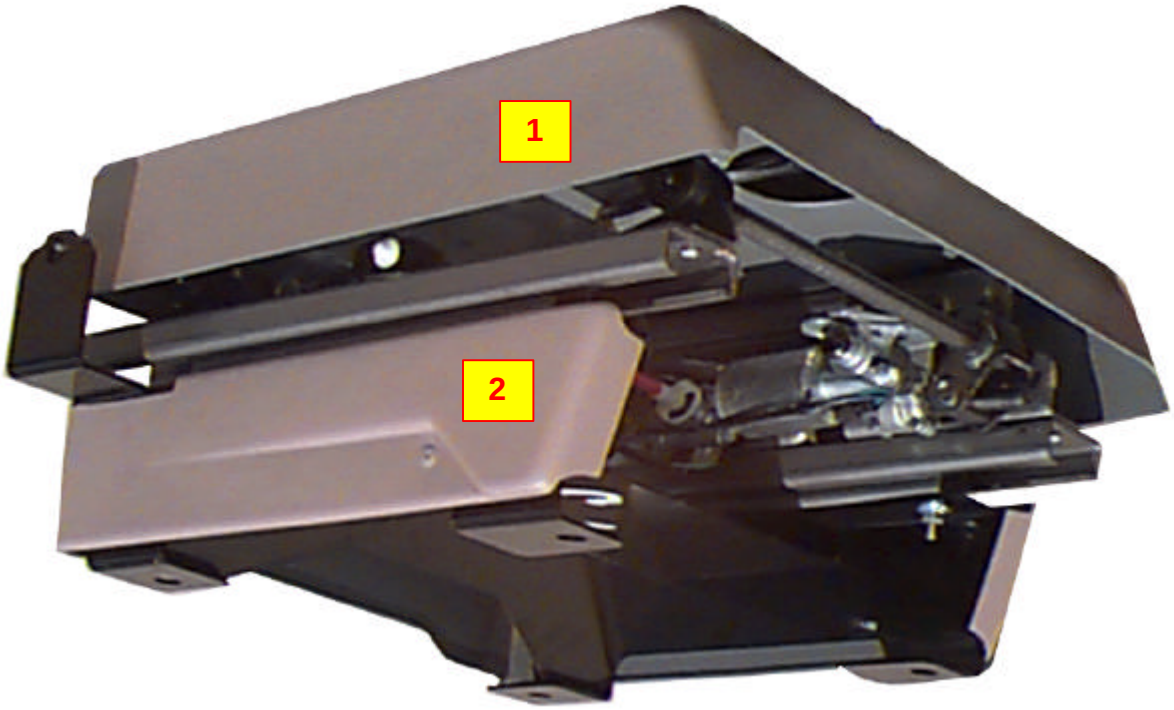
Model	Item No.	Part Description	Part No.	Quantity
Pickup	-	Floor Console	13770166	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Fire Extinguisher	13400210	1



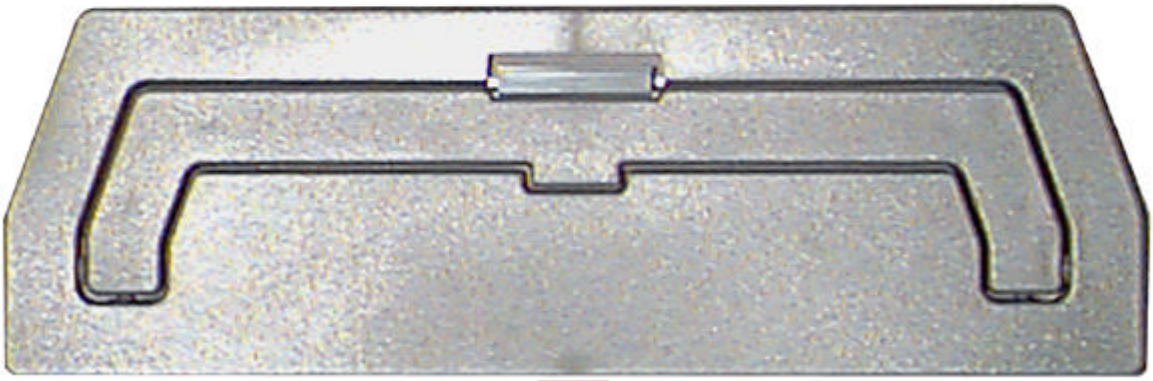
Model	Item No.	Part Description	Part No.	Quantity
SE	1	Faceplate Right Side Satin Finish	13761857	1
SE	2	Faceplate Left Side, Satin Finish	13761855	1
SE	3	TV Piece Lower, Satin Finish	13761874	1
SE	4	TV Piece, Right, Satin Finish	13761872	1
SE	5	TV Piece, Left, Satin Finish	13761872	1
SE	6	VCP Trim Ring, Satin Finish	13761876	1
SE	7	Storage Compartment Door, Satin Finish	13761452	1

Model	Item No.	Part Description	Part No.	Quantity
LE/LX	1	Faceplate Right Side Gloss Finish	13761857	1
LE/LX	2	Faceplate Left Side, Gloss Finish	13761855	1
LE/LX	3	TV Piece Lower, Gloss Finish	13761874	1
LE/LX	4	TV Piece, Right, Gloss Finish	13761872	1
LE/LX	5	TV Piece, Left, Gloss Finish	13761872	1
LE/LX	6	VCP Trim Ring, Gloss Finish	13771463	1
LE/LX	7	Storage Compartment Door, Gloss Finish	13771462	1



Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Front Pedestal, Electric	13300911-2	2
B-Van	1	Upper Shroud	CS	2
B-Van	2	Lower Shroud	CS	2

1



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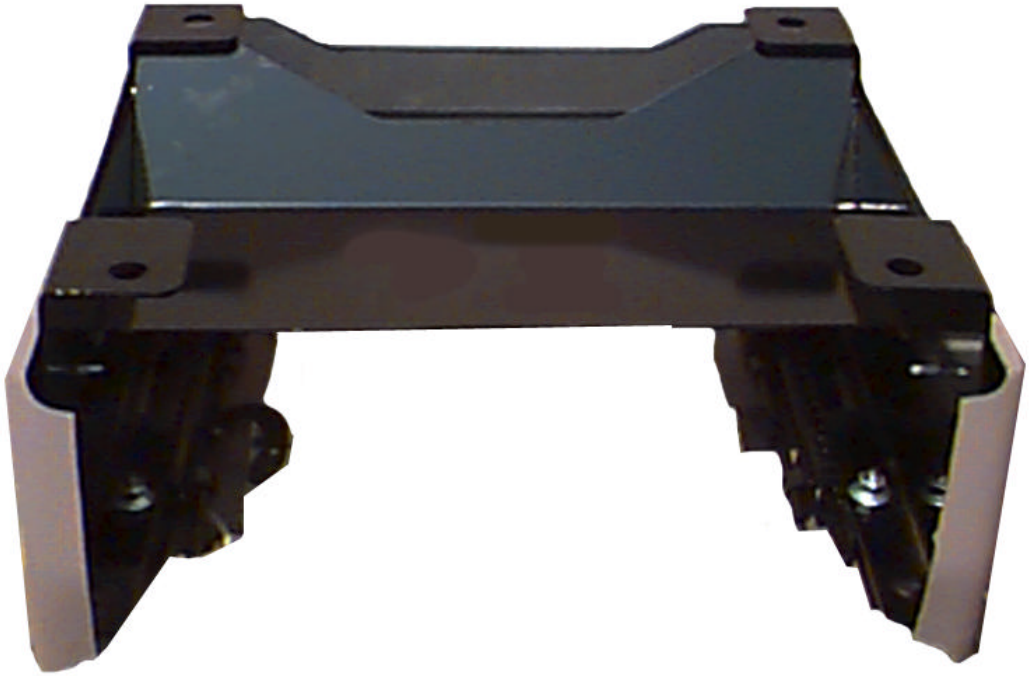
Model	Item No.	Part Description	Part No.	Quantity
All	1	Grab Handle CS	14450400-04	1
All	2	Clothes hanger, fold down CS	14301830-34	2

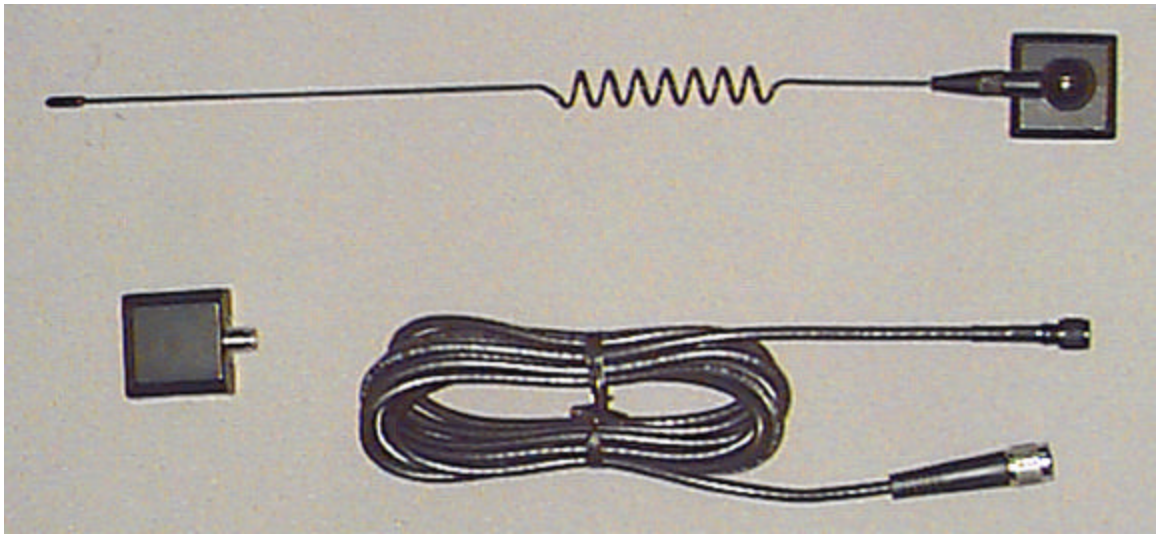
Model	Item No.	Part Description	Part No.	Quantity
All	-	Map/reading Light, Double Lens CS	14472205	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Map/reading Light, Single Lens **CS**	14472200	1



Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Pedestal, Mid Position	13300635	1

Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Pedestal Shroud	CS	1

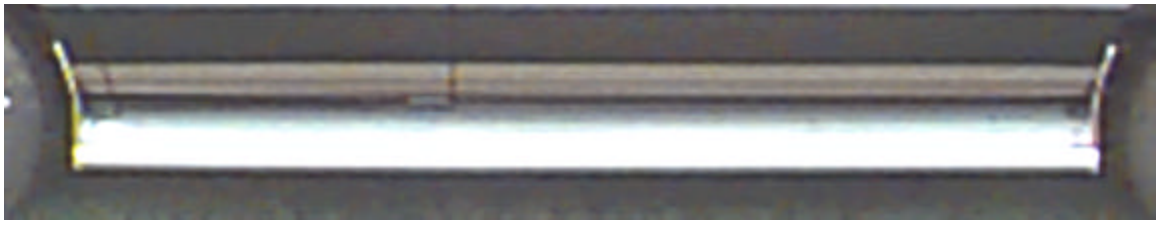


Model	Item No.	Part Description	Part No.	Quantity
All	-	Portable Phone Antenna kit	13210510	1

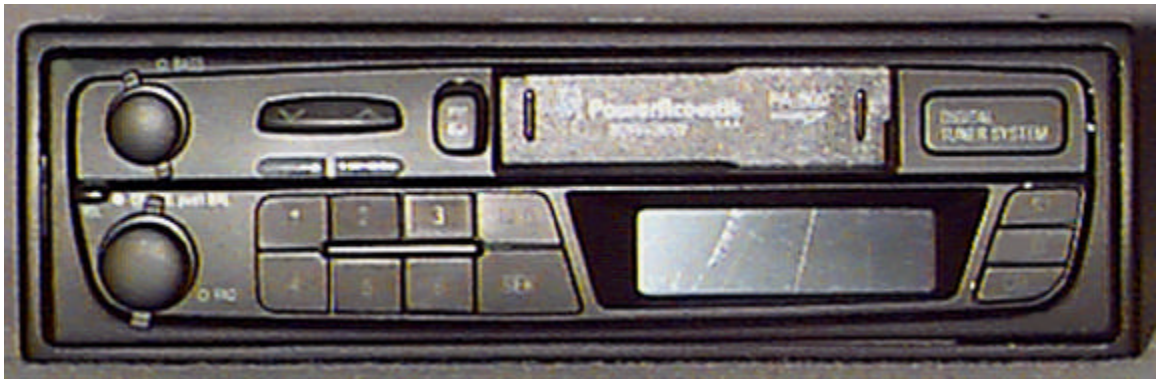
Model	Item No.	Part Description	Part No.	Quantity
All	-	Portable Phone Floor adapter	13210510	1

Model	Item No.	Part Description	Part No.	Quantity
Pickup	-	Pickup Overhead Console	13770815	1

Model	Item No.	Part Description	Part No.	Quantity
T-300 Pickup	-	T-300 Pickup Overhead Console	CS	1

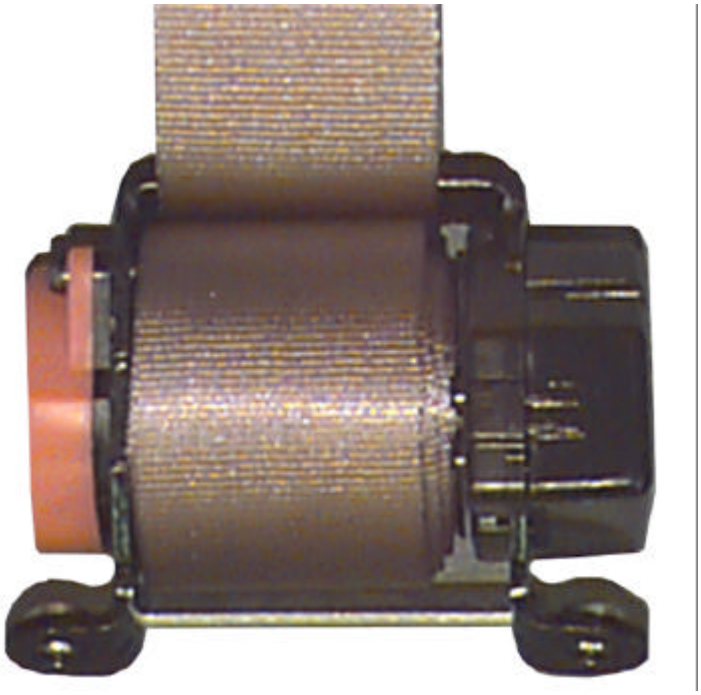


Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Running Board Aluminum - LWB	14310470	1
B-Van	-	Running Board Aluminum - SWB	14310500	1



Model	Item No.	Part Description	Part No.	Quantity
All	1	Rear Radio – Power Acoustic #PA860	13200528	1

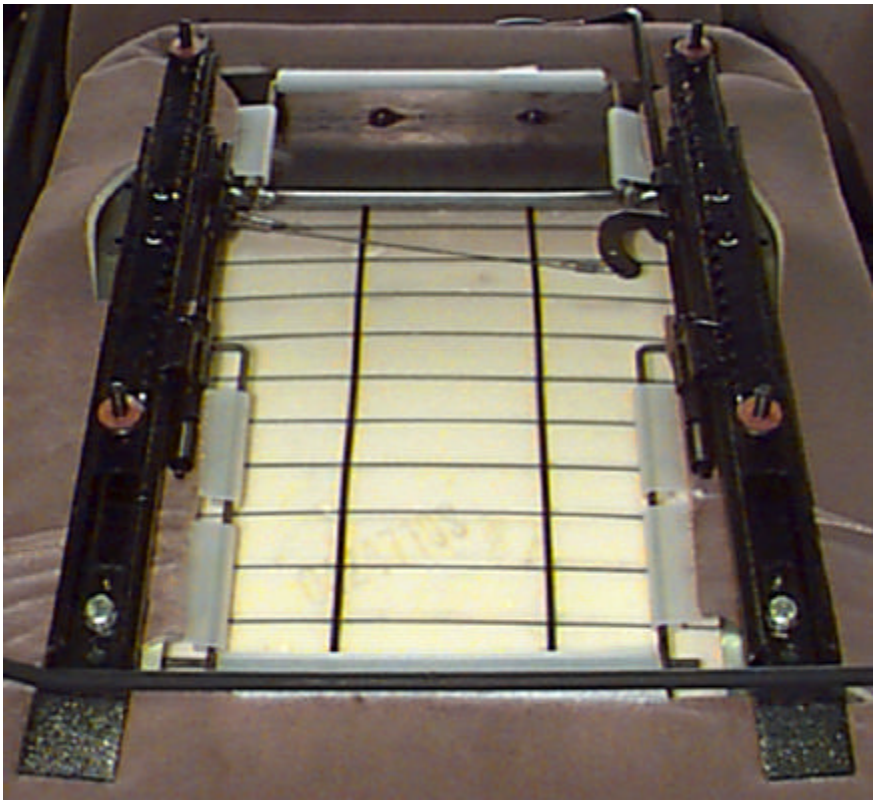
Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Rear Storage Compartment Door	13771460	1



Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Seat Belt Retractor	CS	1

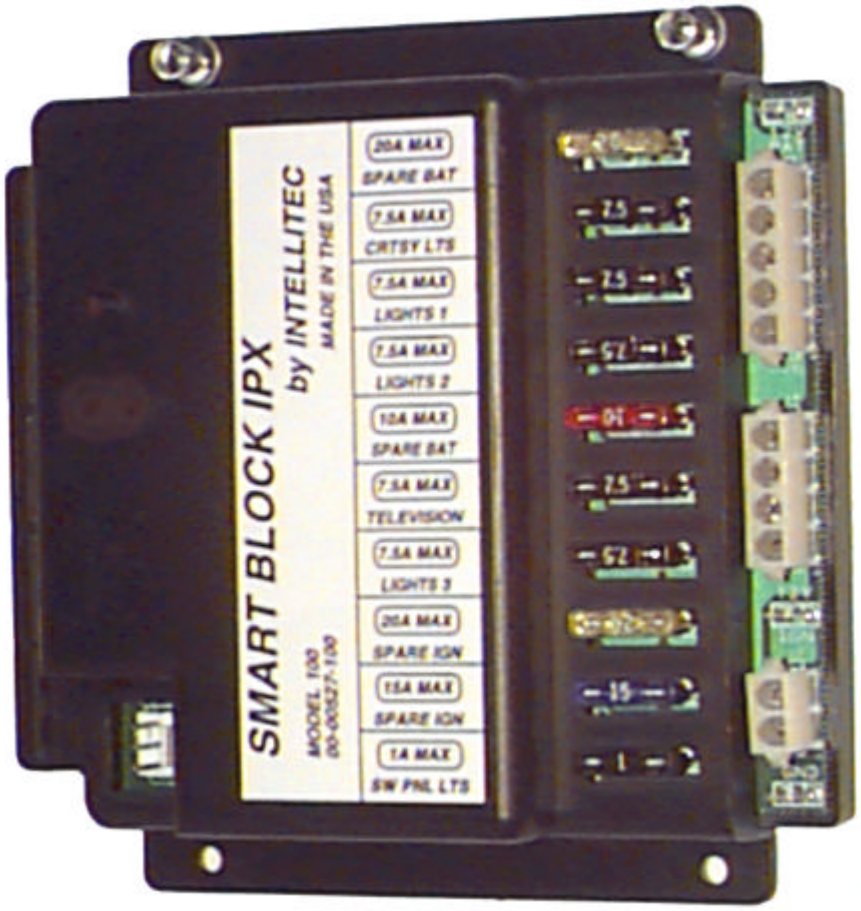
Model	Item No.	Part Description	Part No.	Quantity
All	-	Seat Belt Sofa Mid Position	CS	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Front and Mid Seat	CS	1



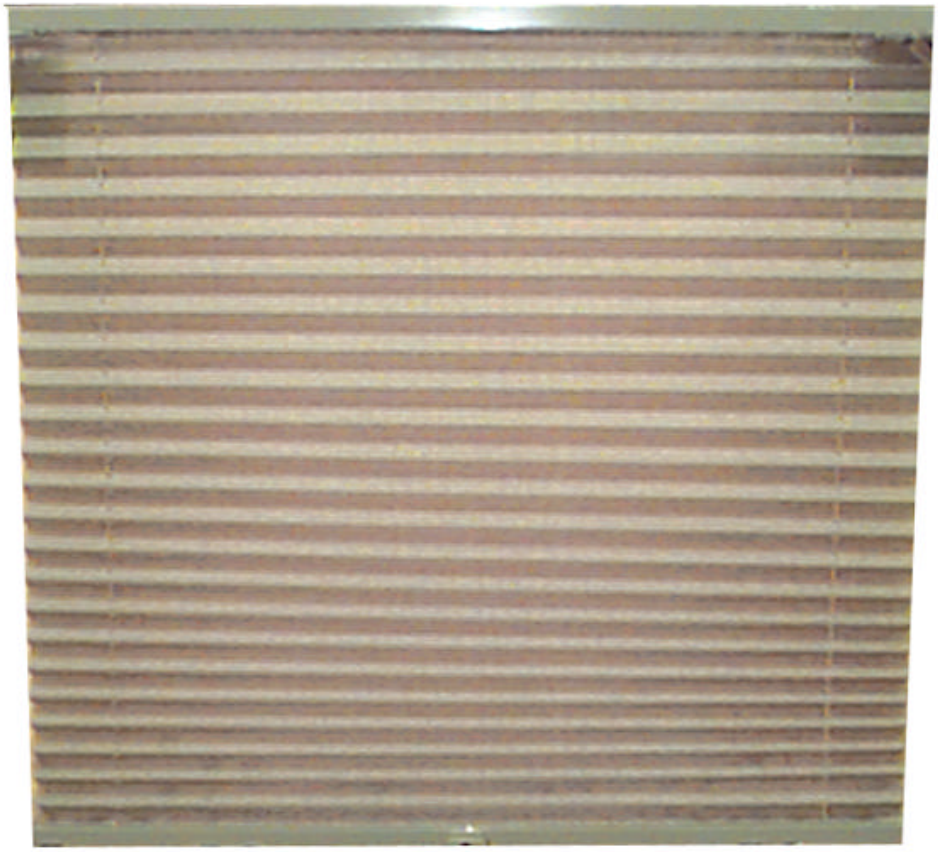
Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Seat Pedestal Sliders	14580300	1

Model	Item No.	Part Description	Part No.	Quantity
-	-	Seat Belt, Receiver/ Receptacle	CS	1

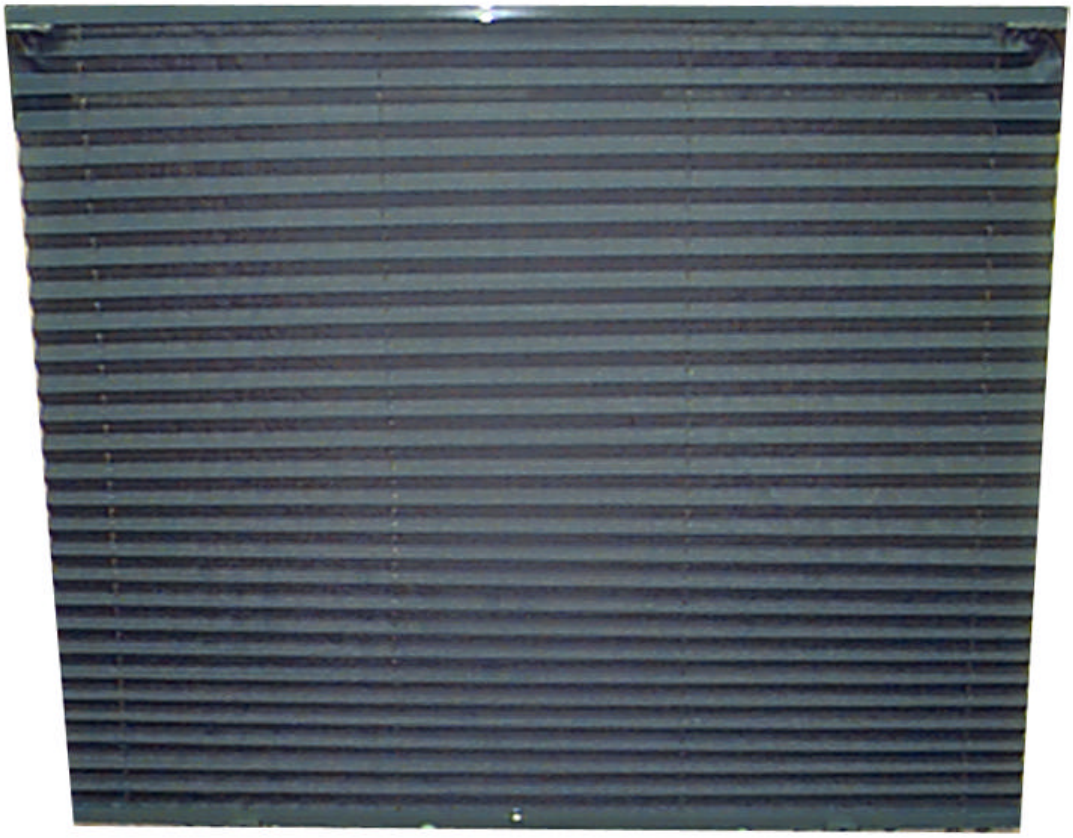


Model	Item No.	Part Description	Part No.	Quantity
All	-	Smart Fuse Block IPX	13260500	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Smart Fuse Block PLUS	13260610	1

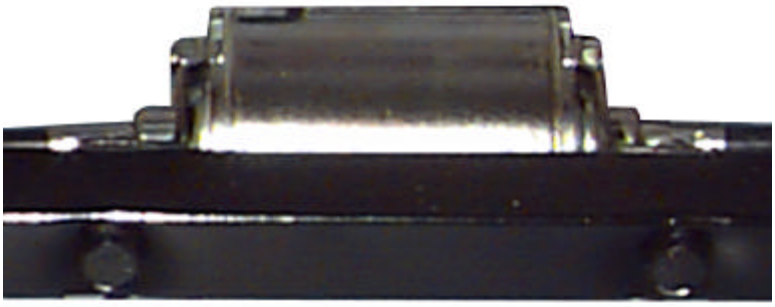


Model	Item No.	Part Description	Part No.	Quantity
All	-	Cargo Door Shade	CS	1

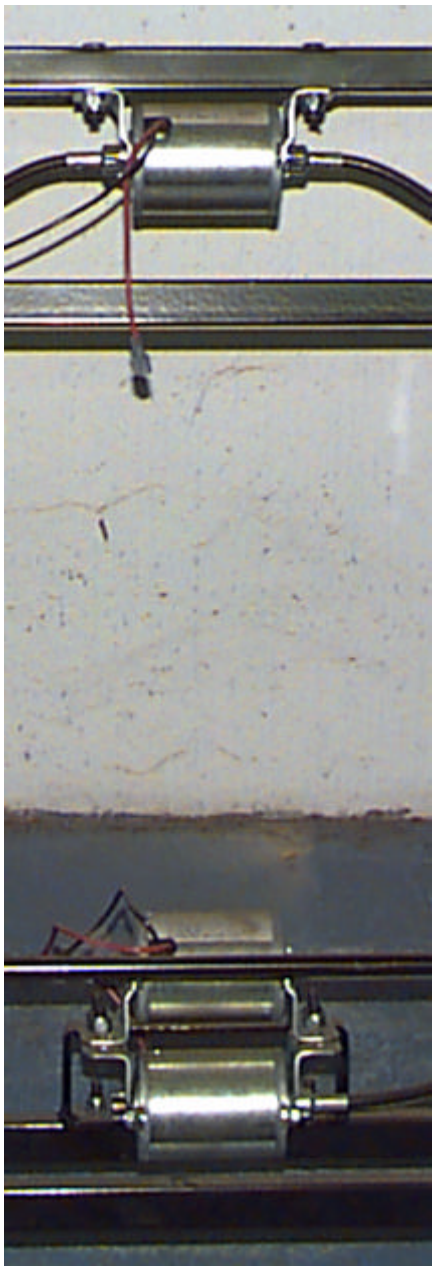


Model	Item No.	Part Description	Part No.	Quantity
All	-	Shade, Vista Bay Window	CS	1

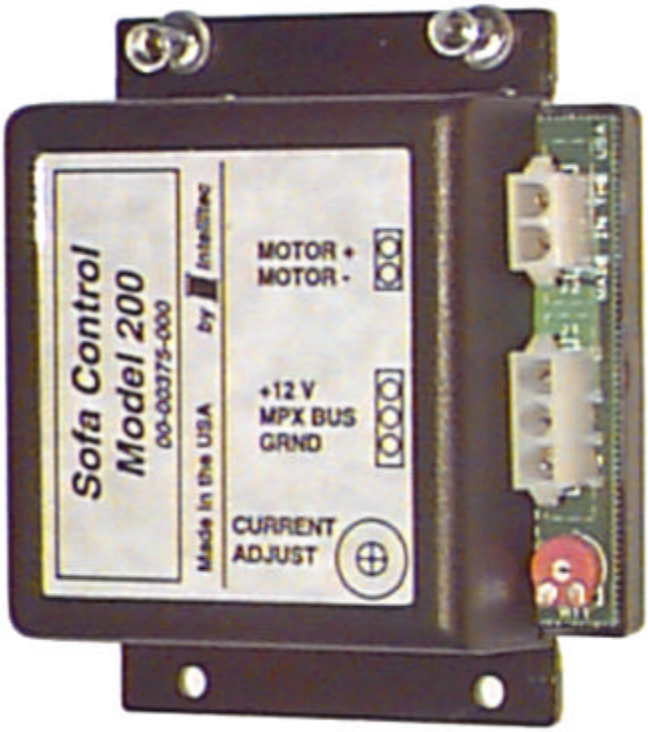
Model	Item No.	Part Description	Part No.	Quantity
All	-	Shroud, Cargo door	CS	1



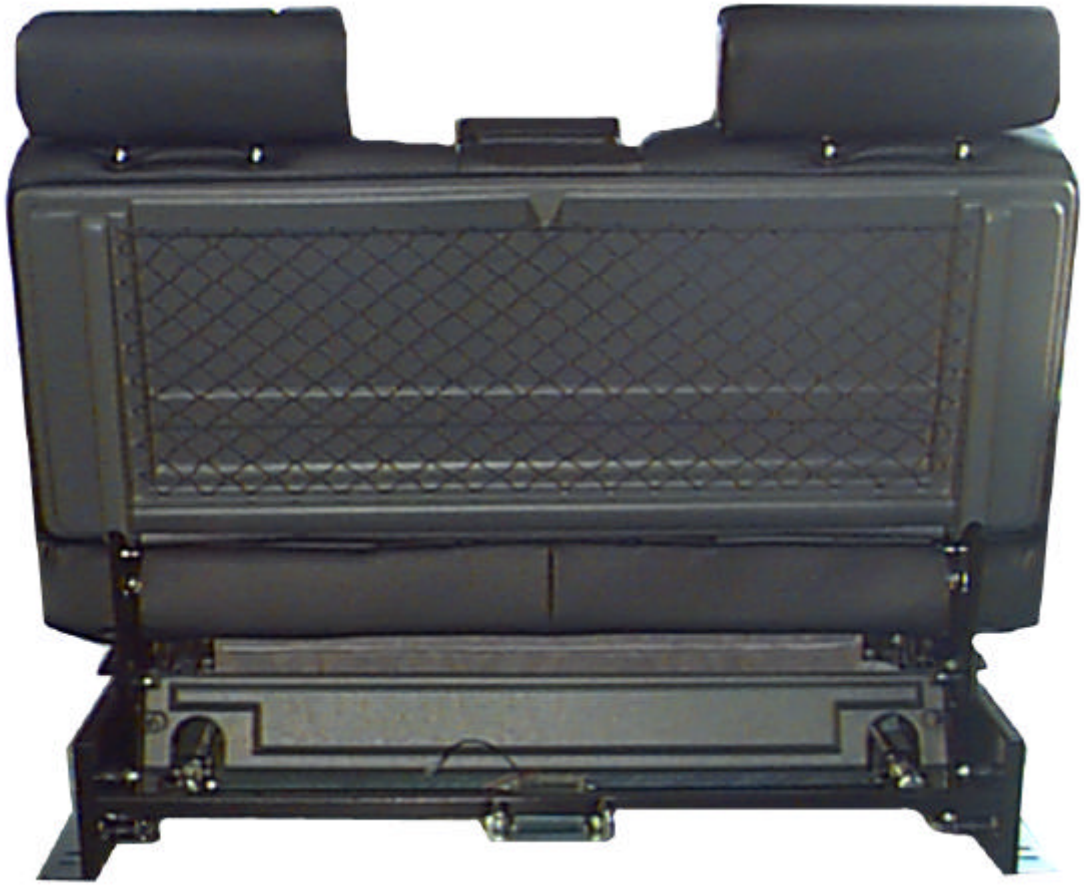
Model	Item No.	Part Description	Part No.	Quantity
All	-	Sofa Motor, Single (Up/Down)	64350002	1



Model	Item No.	Part Description	Part No.	Quantity
All	-	Sofa Motor, Three (Up/Down, Forward, Rearward)	64350002	1

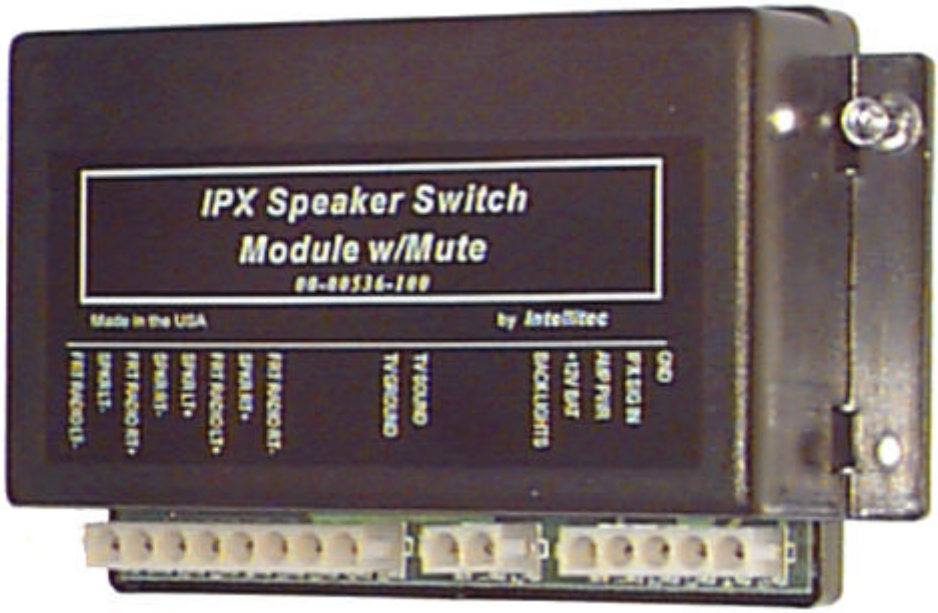


Model	Item No.	Part Description	Part No.	Quantity
All	-	Sofa Control Module, Model 200	13260145	1

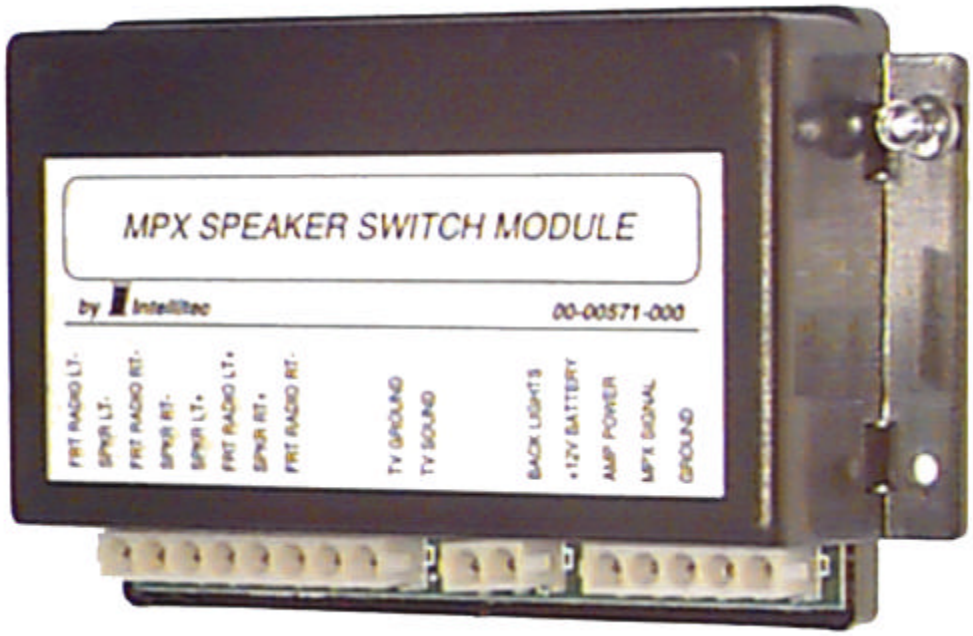


Model	Item No.	Part Description	Part No.	Quantity
All	-	Sofa, Full Size Van, Rear View	CS	1

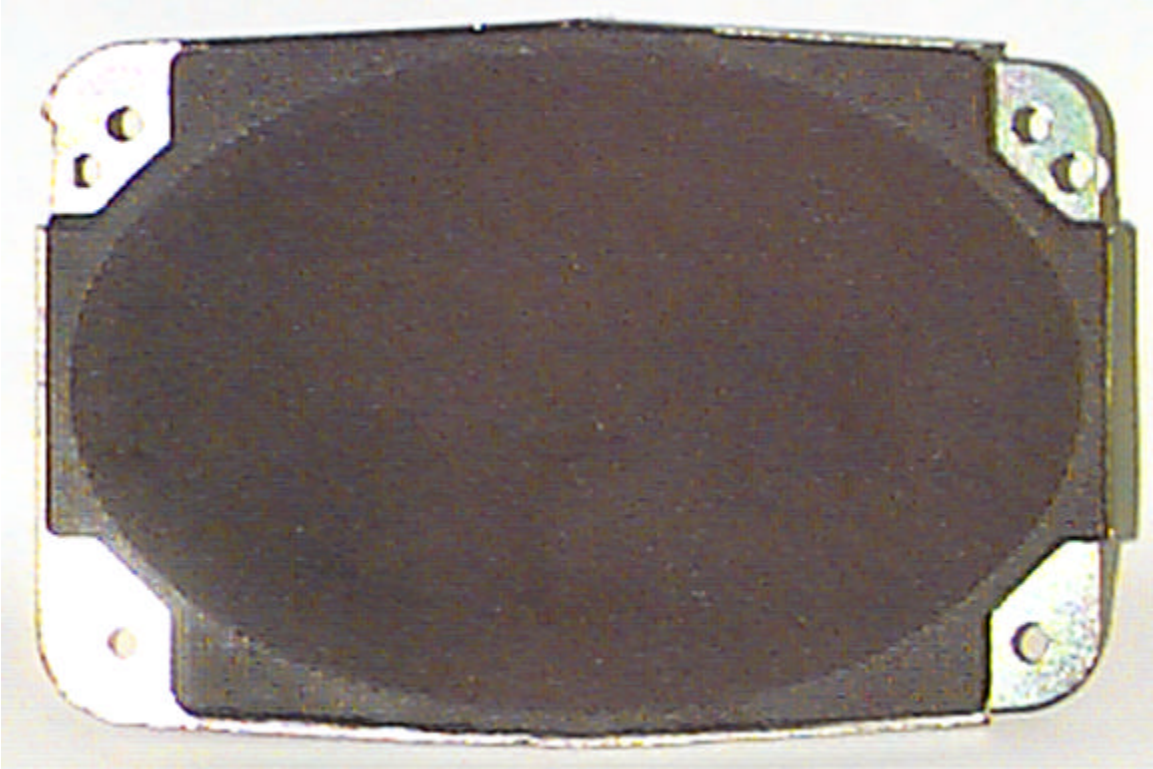
Model	Item No.	Part Description	Part No.	Quantity
All	-	Sofa, Full Size Van, Front View	CS	1



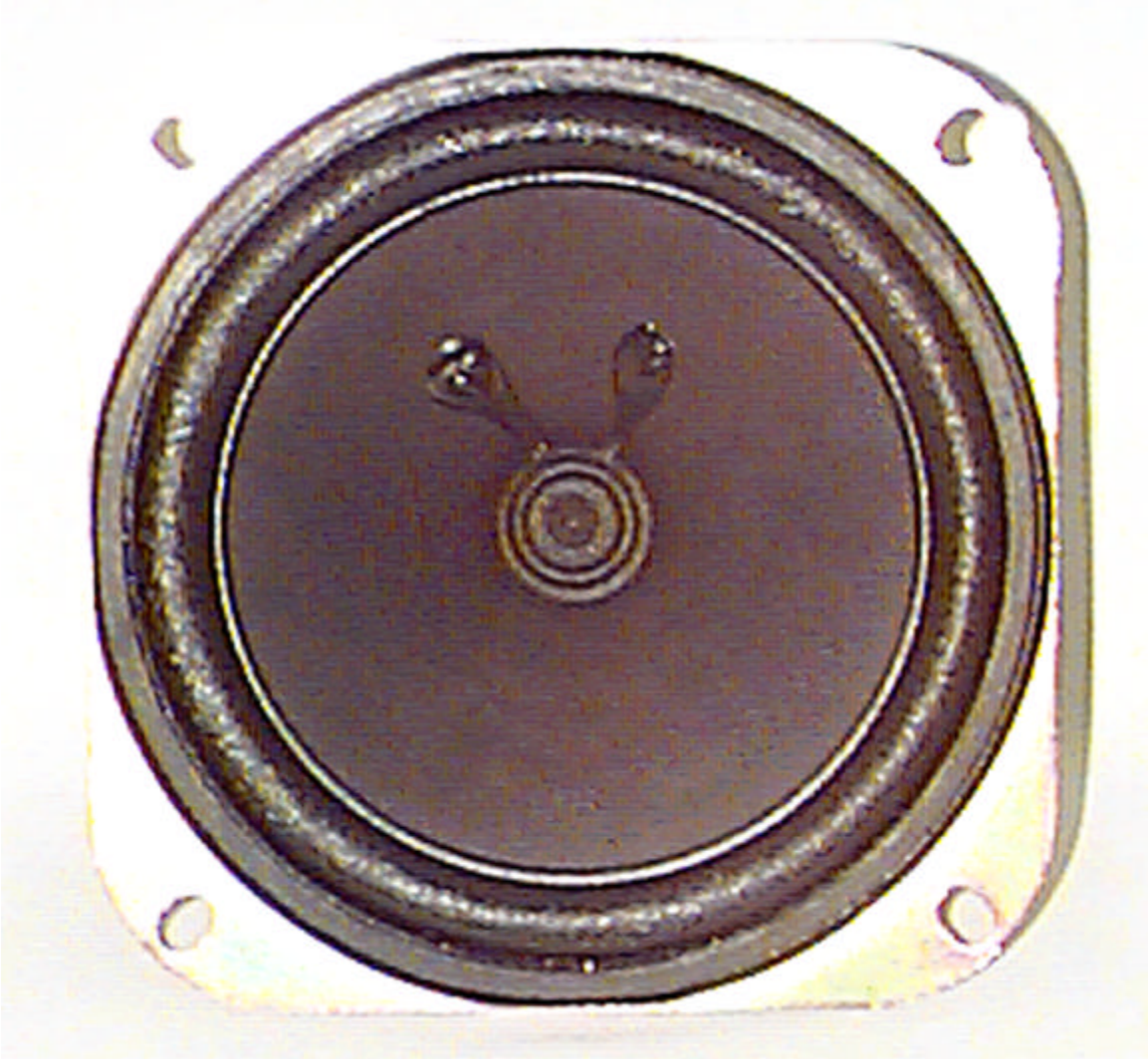
Model	Item No.	Part Description	Part No.	Quantity
All	-	IPX Speaker Switch w/Mute	13260504	1



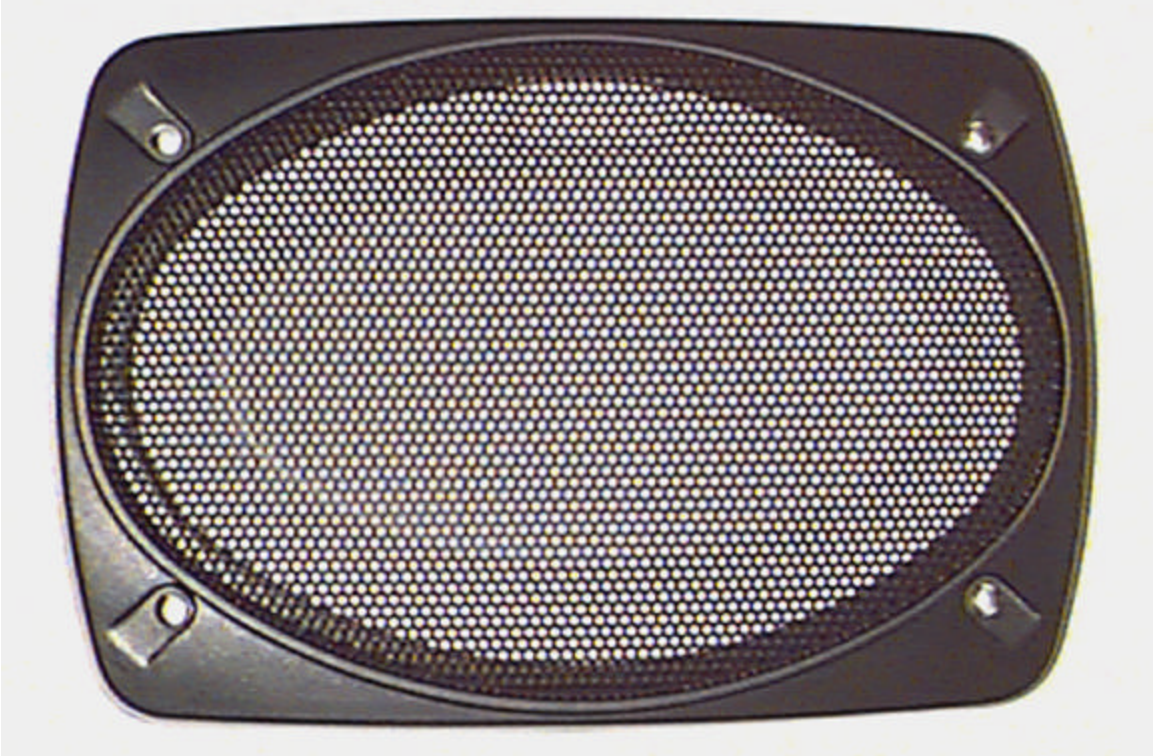
Model	Item No.	Part Description	Part No.	Quantity
All	-	MPX Speaker switch Module	13260605	1



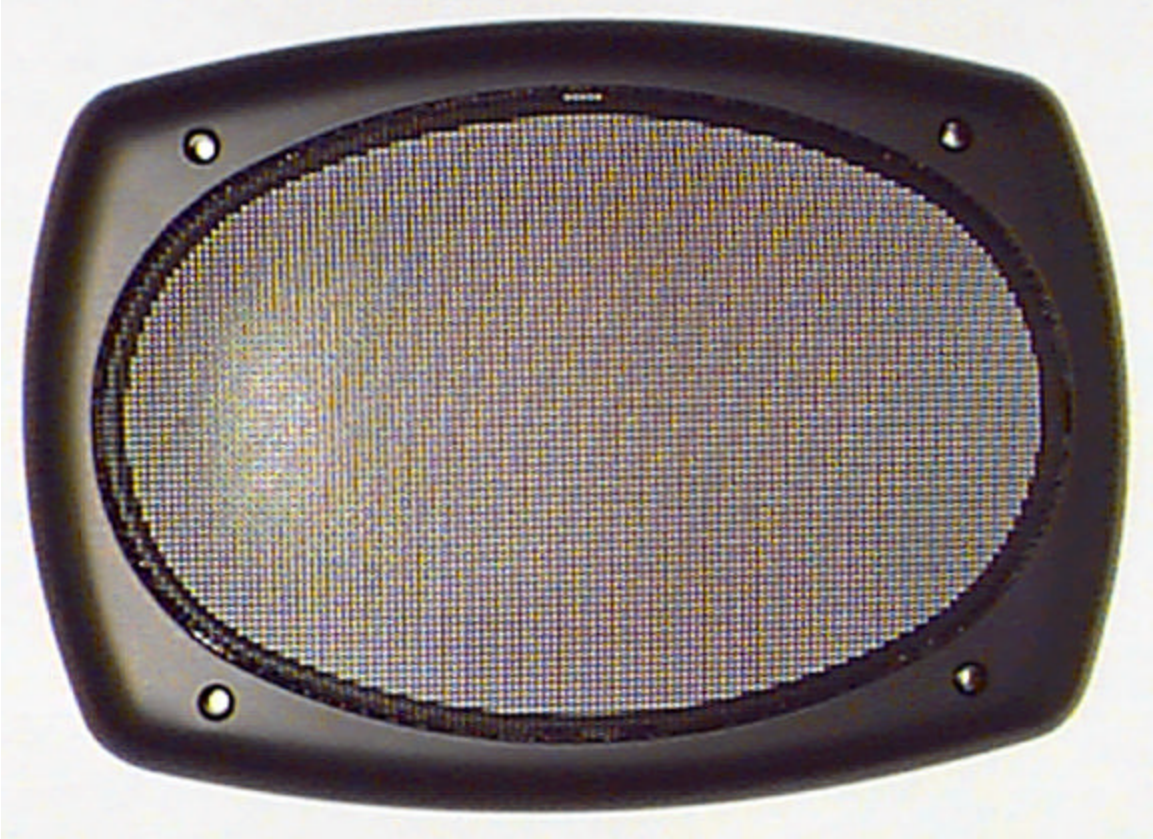
Model	Item No.	Part Description	Part No.	Quantity
All	-	4” x 6” OEM Speaker	13210070	1



Model	Item No.	Part Description	Part No.	Quantity
All	-	4” TV Speaker	13212385	1



Model	Item No.	Part Description	Part No.	Quantity
All	-	Speaker grill, 4” X 6”	13210007	1

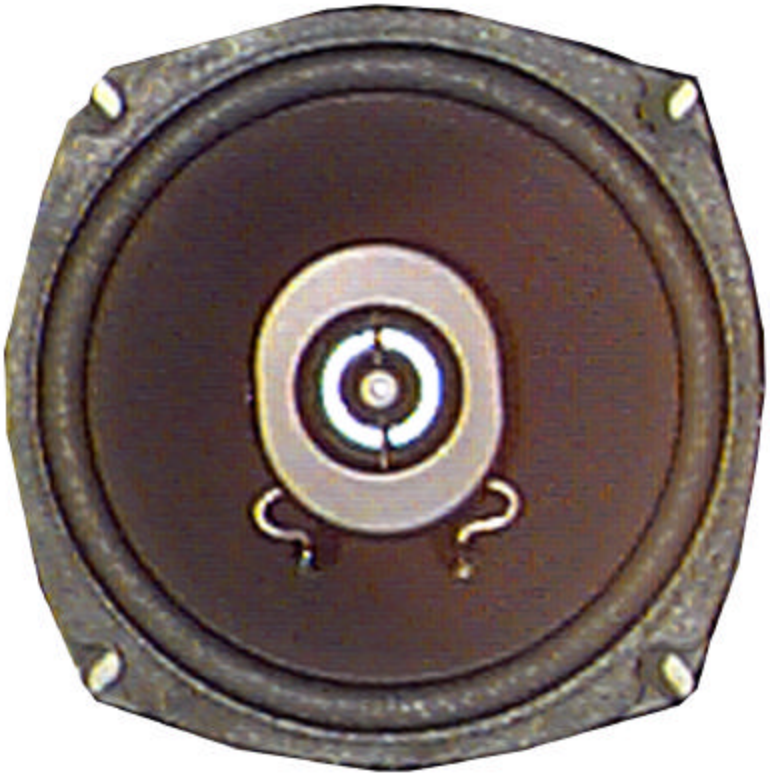


Model	Item No.	Part Description	Part No.	Quantity
All	-	6” X 9” Speaker Grill	13212100	1

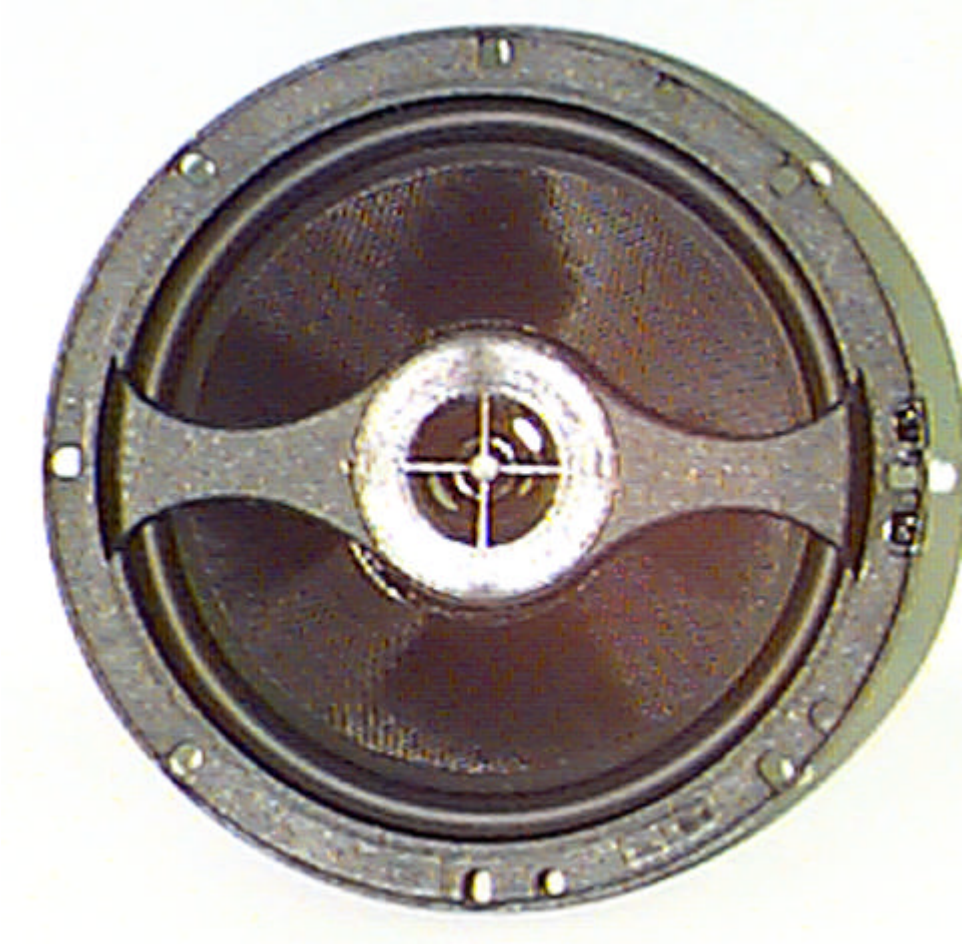
Model	Item No.	Part Description	Part No.	Quantity
All	-	6” SOFARE Speaker Grill	13210001	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	4” TV Speaker grill	13212380	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	5.25” Speaker Grill (Blaupunkt)	Not Available	1



Model	Item No.	Part Description	Part No.	Quantity
All	-	5.25” Speaker (Blaupunkt)	13212710	1

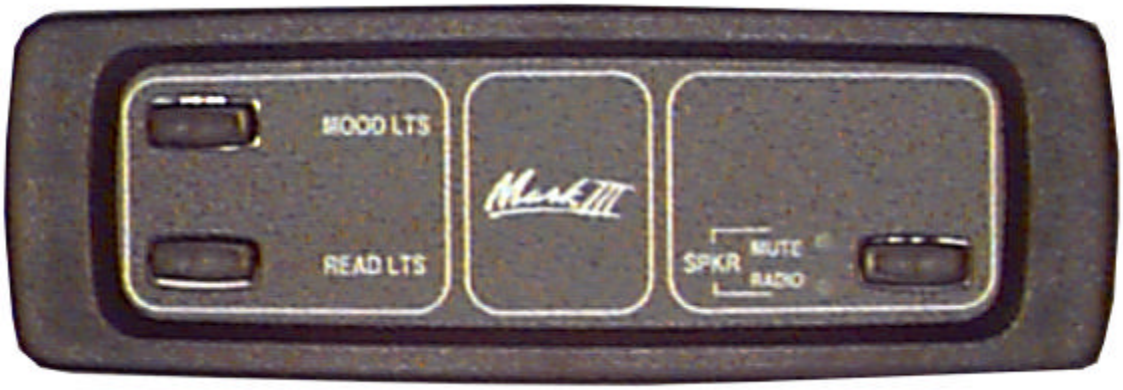


Model	Item No.	Part Description	Part No.	Quantity
All	-	SOFARE Dual Cone Speaker	13210002	1

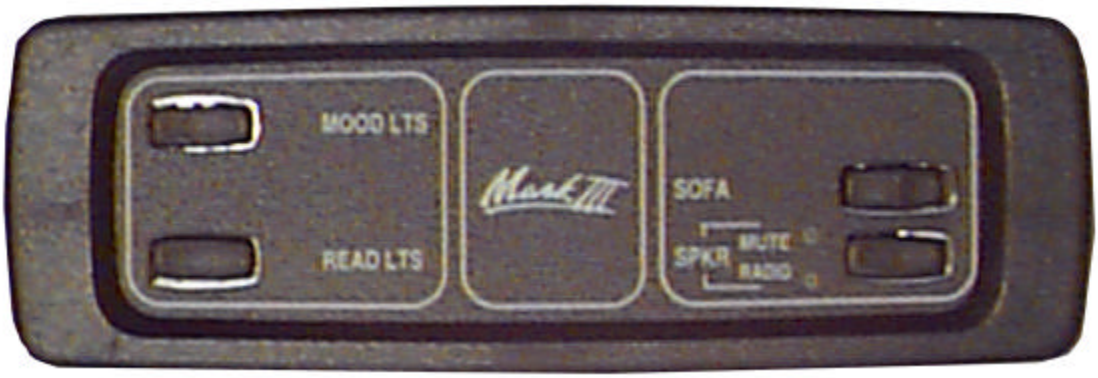
Model	Item No.	Part Description	Part No.	Quantity
All	-	SOFFARE Woofer Speaker	13210003	1

Model	Item No.	Part Description	Part No.	Quantity
T-300 Pickup	-	Step Tube, Ext Cab 4X4, Set	15130175	1
T-300 Pickup	-	Step Tube, Std Cab 4X4, Driver Side	15130150	1
T-300 Pickup	-	Step Tube, Std Cab 4X4, Passenger Side	15130151	1

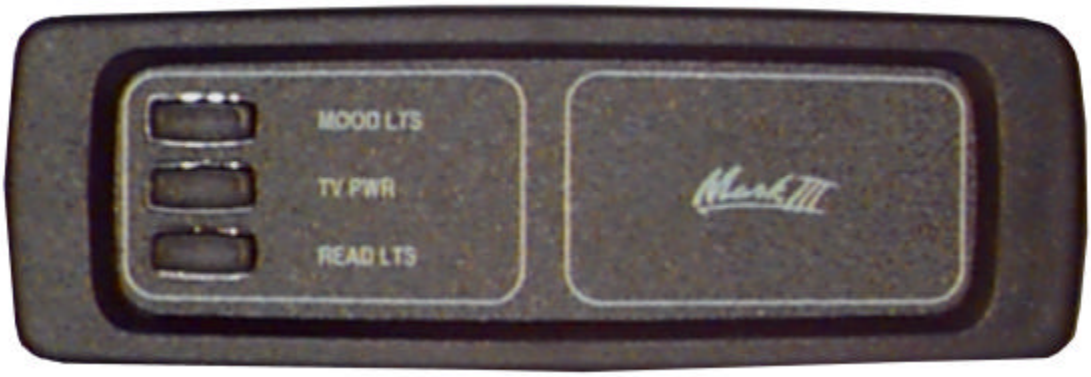
Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Head Phone Jack, TV and Rear Radio	13210365	1



Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Mood/ Reading/ Speaker – Mute/radio	13260188	1



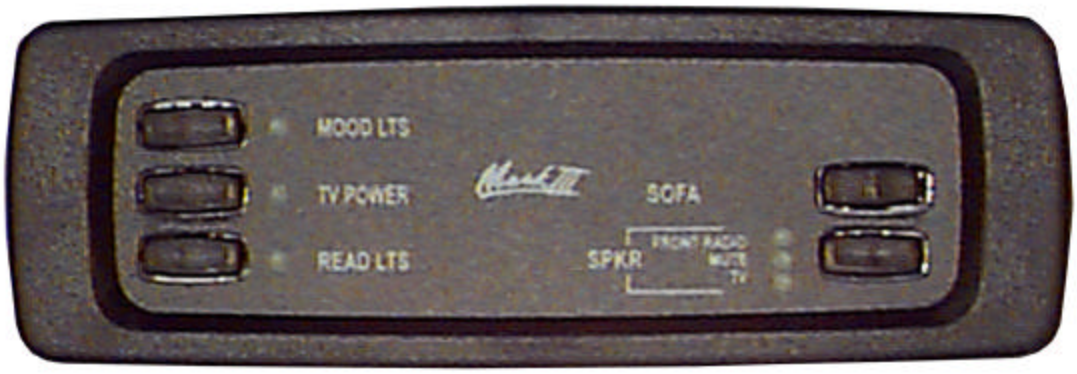
Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Mood/ Reading/ Sofa/ Speaker – Mute/Radio	13260191	1



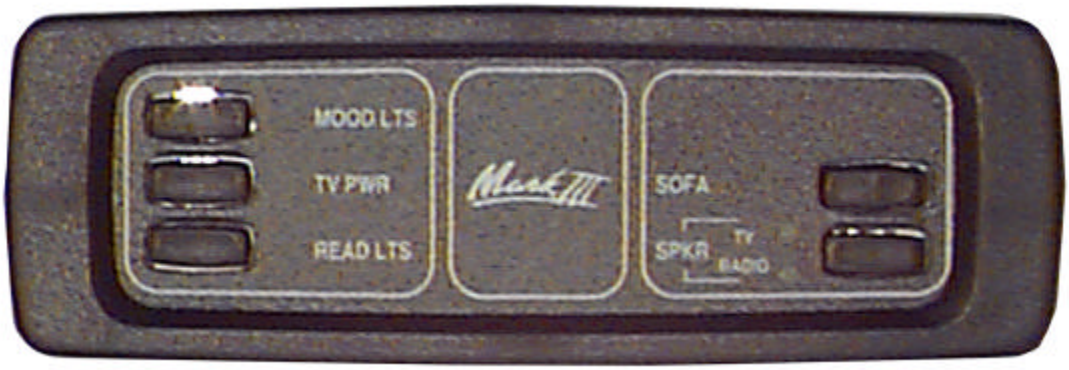
Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Mood/ TV/ Reading	13260182	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Mood/ TV/ Reading/ Sofa	13260196	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Mood/ TV/ Reading/ Speaker – TV/Radio	13260192	1



Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Mood/ TV/ Reading/ Sofa/ Speaker – Radio/ Mute/ TV	13260180	1



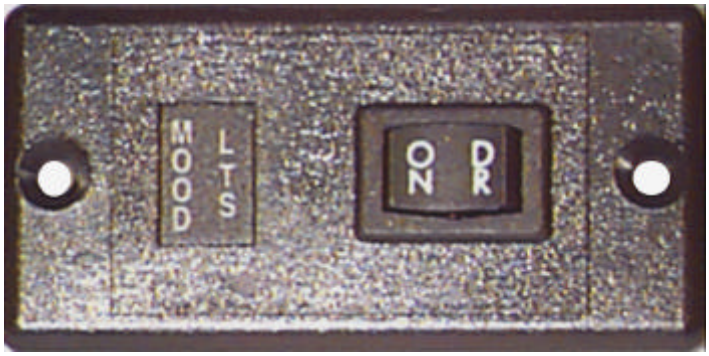
Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Mood/TV/ Reading/ Sofa/ Speaker – TV/Radio	13260194	-

Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Mood/ Reading/ TV Power/ TV Speaker	13260240	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Head Phone Jack, Radio	13260201	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Head Phone Jack, TV	13260305	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Game Ready	13210520	1



Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Mood Light, Small	13260165	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Mood Light and Sofa	13260160	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Sofa, 4 Way	13260158	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Mood/ Reading	13260186	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Switch Plate, Mood/ Reading/ Sofa	13260184	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	BF Goodrich, Radial T/A 225/70R-15	14500535	1
All	-	BF Goodrich, Radial T/A 235/70R-15	14500500	1
All	-	BF Goodrich, Radial T/A 255/70R-15	14500505	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	BF Goodrich, Long Trail TA LT235/75R-15	14500110	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	BF Goodrich, Trail TA LT245/75R-16	15220040	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	TV 13” Audiovox	14390614	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	5” TV Audiovox	14390620	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	9” TV Audiovox	14390610	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	TV/VCP Floor Console, Full Size Van	13771910	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Audiovox Flexvision #CTV-5060	14390650	1

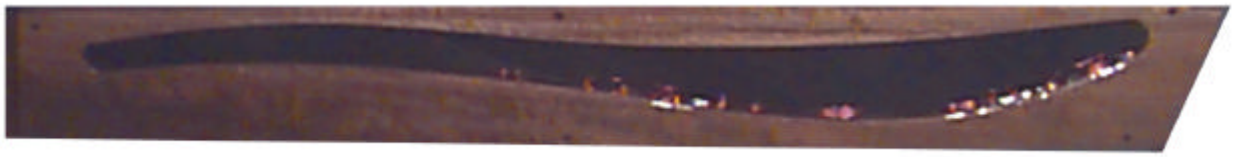
Model	Item No.	Part Description	Part No.	Quantity
All	-	TV Remote Audiovox	14395010	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Vista Bay Window	CS	1
All	-	Handle for Sliding Window	14359351	1
All	-	Window Screen	14359366	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	Vista Bay Window Vent Hole Cover	14350830	1

Model	Item No.	Part Description	Part No.	Quantity
All	-	VCP Audiovox	14720010	1

Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Visor, Full Size Van	CS	1



Model	Item No.	Part Description	Part No.	Quantity
B-Van LX	-	Valance, Gloss Finish Driver Front , Low Top	13772210	1
B-Van LX	-	Valance, Gloss Finish Driver Rear, Low Top	13772211	1
B-Van LX	-	Valance, Gloss Finish Passenger Rear, Low Top	13772212	1

Model	Item No.	Part Description	Part No.	Quantity
B-Van SE	-	Valance, Satin Finish Driver Front, High Top	13762120	1
B-Van SE	-	Valance, Satin Finish Driver Rear, High Top	13762122	1
B-Van SE	-	Valance, Satin Finish Passenger Rear, High Top	13762124	1
B-Van SE	-	Storage Compartment Door Side	13761450	1

Satin Finish SE Model

Model	Item No.	Part Description	Part No.	Quantity
B-Van LE	-	Valance, Gloss Finish Driver Front, High Top	13772120	1
B-Van LE	-	Valance, Gloss Finish Driver Rear, High Top	13772122	1
B-Van LE	-	Valance, Gloss Finish Passenger Rear, High Top	13772124	1
B-Van LE	-	Storage Compartment Door Side	13771461	1

Gloss Finish LE Model

Model	Item No.	Part Description	Part No.	Quantity
B-Van LX	-	Valance, Gloss Finish Driver Front, High Top	13772120	1
B-Van LX	-	Valance, Gloss Finish Driver Rear, High Top	13772122	1
B-Van LX	-	Valance, Gloss Finish Passenger rear, High Top	13772124	1
B-Van LX	-	Storage Compartment door Side	13771461	1

Gloss Finish LX Model

Model	Item No.	Part Description	Part No.	Quantity
B-Van SE	-	Valance, Satin Finish Driver Front , Low Top	13762130	1
B-Van SE	-	Valance, Satin Finish Driver Rear, Low Top	13762132	1
B-Van SE	-	Valance, Satin Finish Passenger Rear, Low Top	13762134	1

Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Alumitec Wheel	15210265	1

Model	Item No.	Part Description	Part No.	Quantity
T-300 Pickup	-	Alumitec Wheel Painted	15210510	1
T-300 Pickup	-	Alumitec Wheel Polished	15210515	1

Model	Item No.	Part Description	Part No.	Quantity
Caravan/ Voyager	-	Prime Wheel	15210605	1

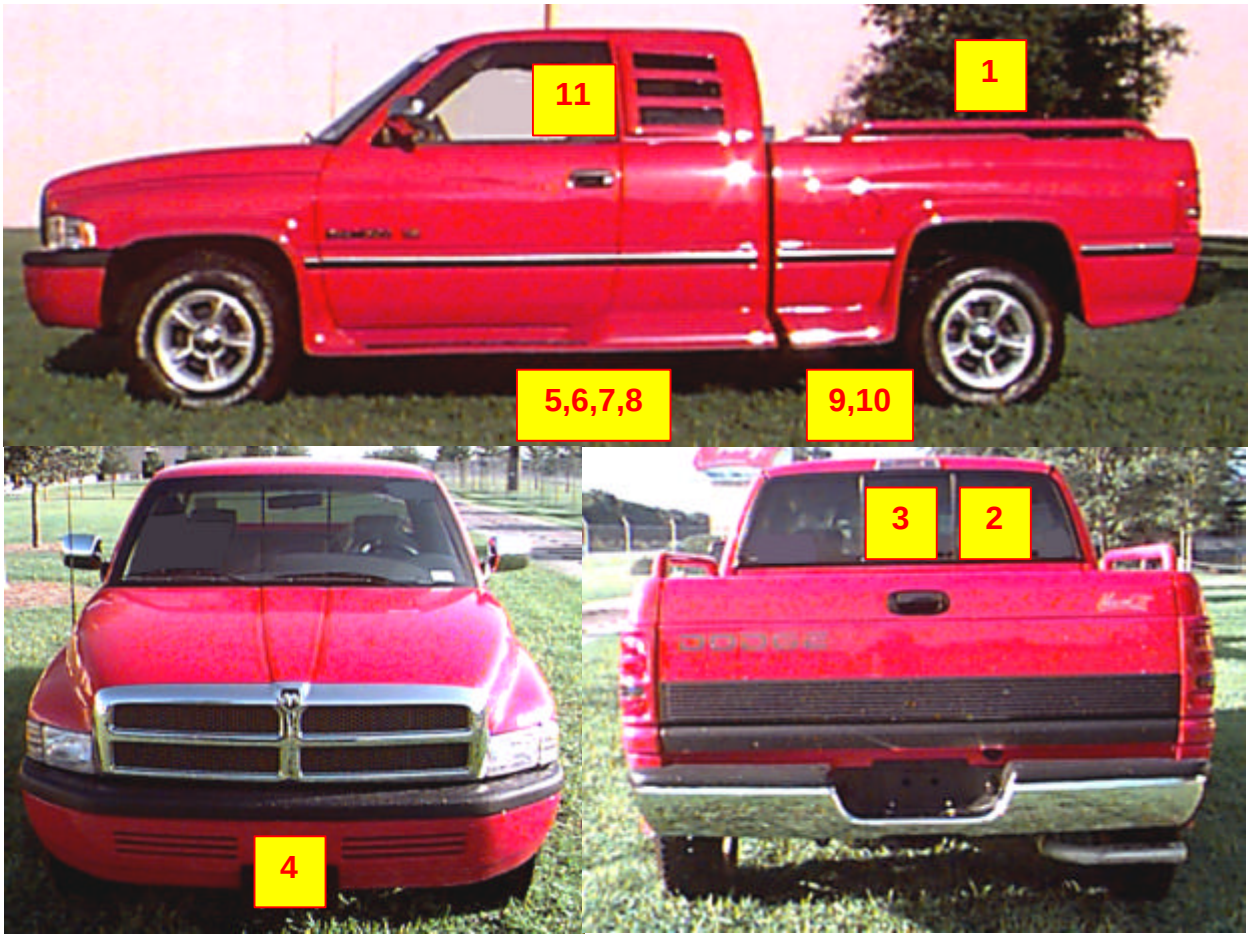
Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Graphics	CS	1
B-Van	1	Running Board Passenger Side	14711085	1
B-Van	2	Running Board Driver Side	14711080	1
B-Van	3	Front Flair Driver side	14711060	1
B-Van	4	Front Flair Passenger Side	14711070	1
B-Van	5	Rear Flair Driver Side	14711065	1
B-Van	6	Rear Flair Passenger Side	14711075	1
B-Van	7	Tire Carrier, Trim Ring	14430180	1
B-Van	8	Tire Carrier, Center Disc	14430168	1
B-Van	9	Step Plate, Front Bumper	14490225	1

Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Graphics, Van	CS	1

Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Graphics, Van	CS	1

Model	Item No.	Part Description	Part No.	Quantity
Voyager/ Caravan	-	Graphics, Van	CS	1
Voyager/ Caravan	-	Running Board, Driver Side	14710515	1
Voyager/ Caravan	-	Running Board, Passenger Side	14710516	1

Model	Item No.	Part Description	Part No.	Quantity
Voyager/ Caravan	-	Graphics, Van	CS	1



Model	Item No.	Part Description	Part No.	Quantity
Pickup	1	Bed Rail	15130205	1
Pickup	2	Window, Rear Slider	15140270	1
Pickup	3	Window, Rear Slider, Motor	15141020	1
Pickup	4	Bumper Cover, Front	14710907	1
Pickup	5	Running Board, Std Cab, DS	15120242	1
Pickup	6	Running Board, Std Cab, PS	15120241	1
Pickup	7	Running Board, Ext Cab, DS	15120253	1
Pickup	8	Running Board, Ext Cab, PS	15120254	1
Pickup	9	Running Board, DS Bed	15120243	1
Pickup	10	Running Board, PS Bed	15120244	1
Pickup	11	Window Louver - Set	15150255	1
				1

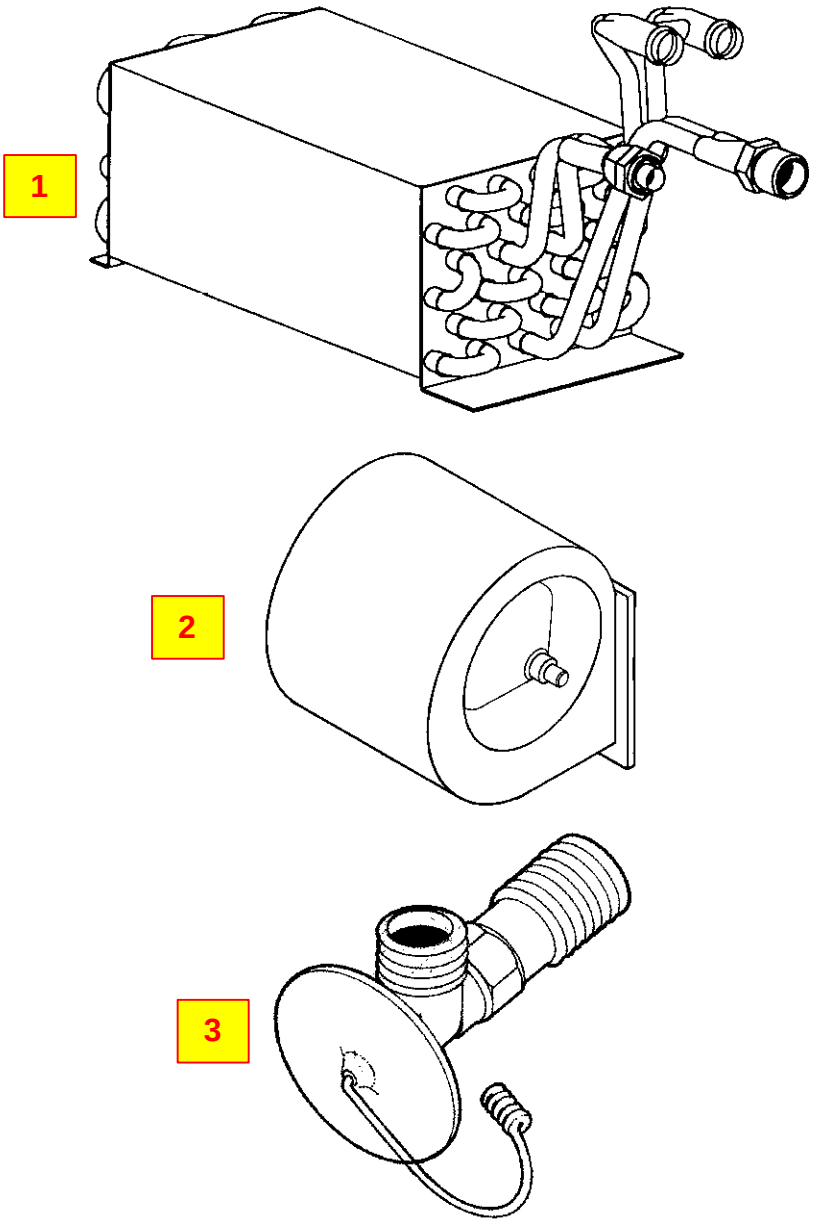
DS – Driver Side
PS – Passenger Side

Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Console, Overhead, Molded	CS	1

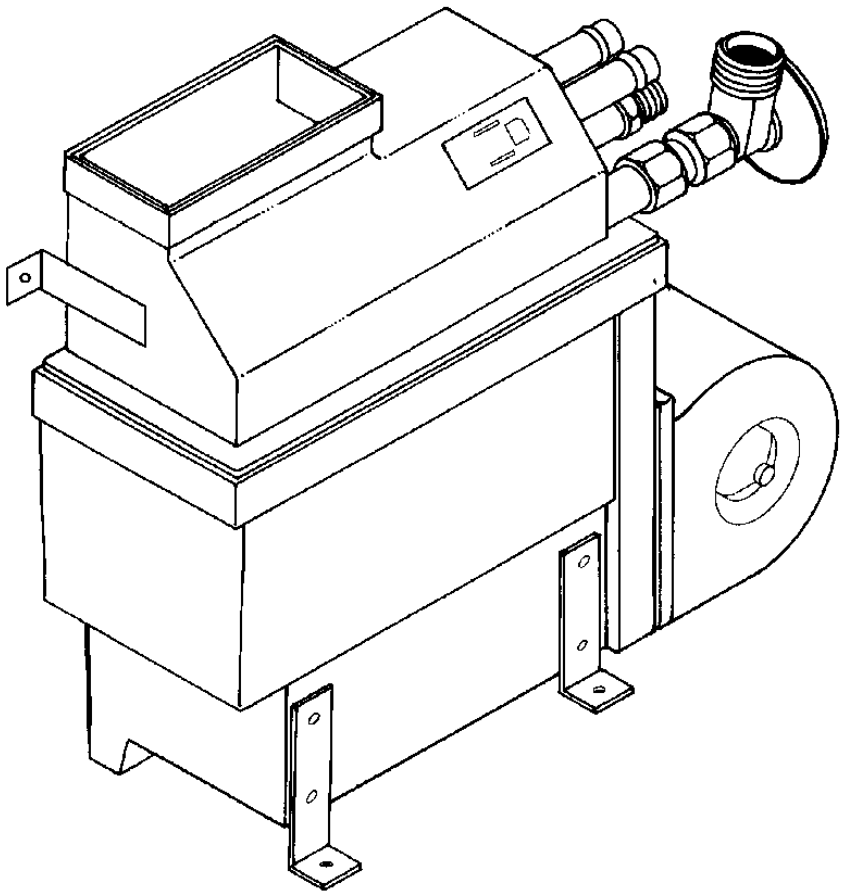
Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Wall, Deluxe	CS	1
B-Van	1	Vent, A/C Return	CS	1
B-Van	2	Wall, Deluxe, Top Plate	CS	1

Model	Item No.	Part Description	Part No.	Quantity
B-Van	-	Window Sill, SE, DS, Front, LWB	13761509	1
B-Van	-	Window Sill, SE, DS, Rear, LWB	13761486	1
B-Van	-	Window Sill, SE, PS, Rear, LWB	13761487	1
B-Van	-	Window Sill, LE, DS, Front, LWB	13771509	1
B-Van	-	Window Sill, LE, DS, Rear, LWB	13771486	1
B-Van	-	Window Sill, LE, PS, Rear, LWB	13771487	1
B-Van	-	Window Sill, LX, DS, Front, LWB	13771509	1
B-Van	-	Window Sill, LX, DS, Rear, LWB	13771486	1
B-Van	-	Window Sill, LX, PS, Rear, LWB	13771487	1

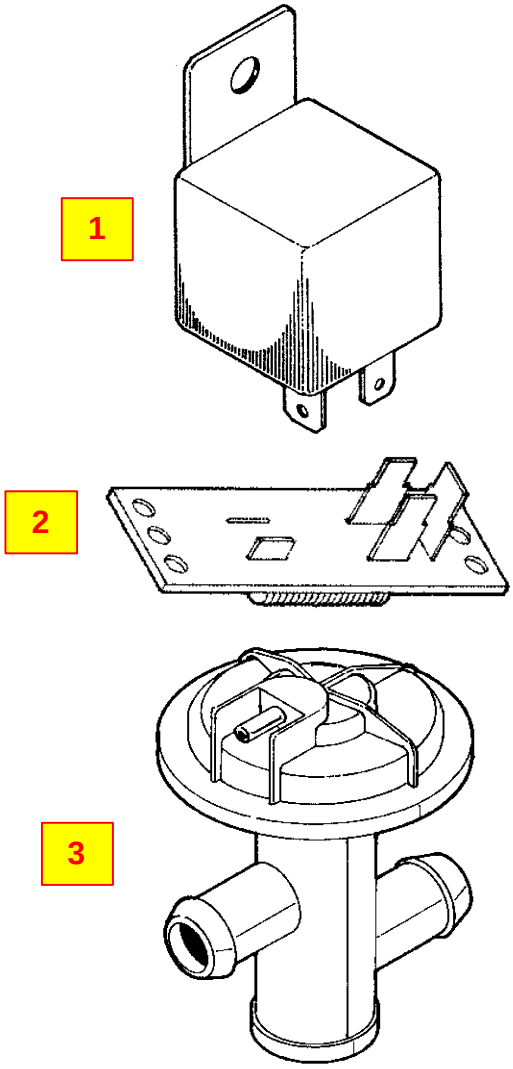
DS – Driver Side
PS – Passenger Side



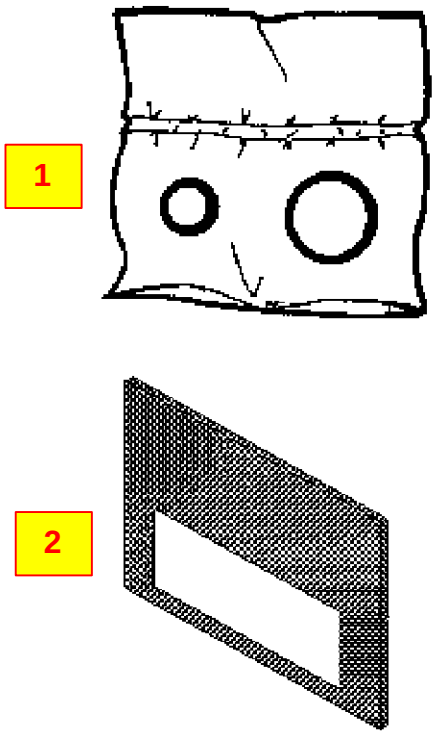
Model	Item No.	Part Description	Part No.	Quantity
All	1	A/C Evaporator/ Heater Core	14446041	1
All	2	A/C Blower Assembly	14446040	1
All	3	A/C Expansion Valve	14446042	1



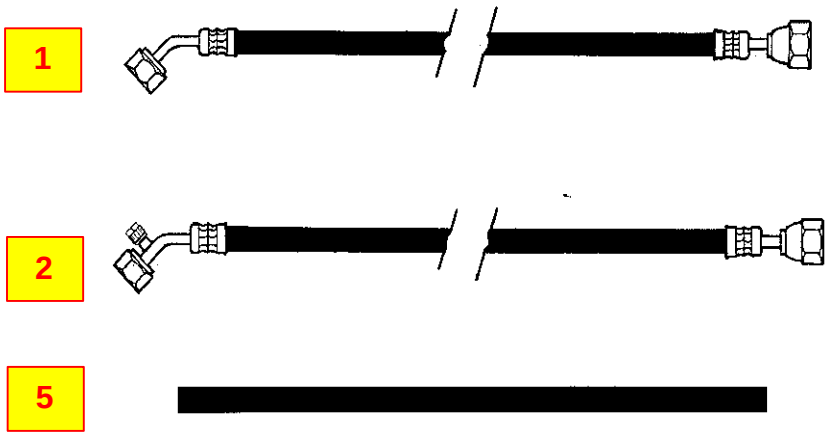
Model	Item No.	Part Description	Part No.	Quantity
G-Van	-	Power Pack Assembly	14446002	1
Ford	-	Power Pack Assembly	14446012	1
Dodge	-	Power Pack Assembly	14446024	1
Astro	-	Power Pack Assembly	14446032	1



Model	Item No.	Part Description	Part No.	Quantity
All	1	Relay	14446043	1
All	2	Resistor	14446044	1
All	3	Water Valve	14446045	1



Model	Item No.	Part Description	Part No.	Quantity
All	1	A/C Line Fitting O-ring Kit	N/A	1
All	2	A/C Blower Seal	N/A	1



Model	Item No.	Part Description	Part No.	Quantity
B-Van LWB	1	A/C Line, Liquid	14446020	1
B-Van LWB	2	A/C Line, Suction	14446021	1
B-Van SWB	1	A/C Line, Liquid	14446022	1
B-Van SWB	2	A/C Line, Suction	14446023	1
All	5	Heater Hose, 5/8”	14446015	1

ILLUSTRATED GUIDE
for 9000 SYSTEM

ILLUSTRATED GUIDE
for 9000 SYSTEM

EMI DIGITAL ELECTRONIC CONTROL CENTER
FEATURES

The DECC system uses state of the art surface mount components and has the following diverse features and functions:

1 - DECC Main Fuse Panel - Software driven digitally controlled switching system with internal timer, voltage sensors for low battery and sofa-current protection and systems sampling 22 times each second.
- State of the Art surface mount electronics combined with robust relay and fuse system assuring the highest level of durability and reliability.
- Digitally controlled software driven technology providing the greatest system flexibility and operational consistency.
- Full sofa motor controller system with 30 amp rated relays to assure optimum performance.
- Sofa motor reversing delay to prevent excessive shock to mechanical and electrical systems.
- Driver position sofa override (Lock-Out) feature to prevent any unauthorized operation of the power sofa.
- Timer for "door open" courtesy lights (20 seconds-software adjustable).
- Timer for DECC panel light to assure that the light will not remain on unintentionally.
- Timer/warning alert for low battery (1 minute) then system will shut down.
- Timer to keep power up after "ignition off" for 20 minutes, then system powers down.
- System becomes active when the door is opened and the 20 minute timer restarts. The Courtesy light circuit will power down if a door is left open to prevent Low Battery (20 minute). To reactivate the system you must close all doors and reopen to restart the timer.
- Switch activation priority system - "first switch"
- Driver priority control over all interior lights.
- Sofa lock defaults to "normal operation" when ignition is turned off.
- Fully fused circuit protection for B+ and ignition (15 fuses and 1 PCB mounted automatic reset fuse).
- Driver controlled full stereo speaker switching select/mute system.
- Electronic circuitry has been designed with out-put and in-put noise protection devices to prevent audio interference and systems operational interference.
- All wiring harness connectors are mounted on the underside of DECC main fuse panel (no visible wires).
- All vehicle conversion functions are on one PCB.
  - 10 discrete relay circuits available.
  - Full stereo audio source switching system.
  - Robust sofa motor control system (30 amp relays)
  - Main switch panel (6 Button) is fully software active for reassigning function positions.
- DECC Main Fuse Panel has back lighting, spare fuses, fuse puller and separate sofa fuse location.

2 - Main Switch Panel (6 button) is the key control center for the driver. From this position all critical functions can be controlled.
- Mood lights are controlled from this position.
- Read lights are controlled from this position.
- Driver controls TV power.
- Driver can select speaker audio sources between TV and Factory radio and can mute the speakers at anytime.
- Driver can quickly "lock-out" the sofa motor control from the rear sofa switches.
- The position of each switch function at the Main Switch Panel can be reassigned by initiating the reprogramming function at the DECC panel and following a simple intuitive step by step procedure for button reassignment.
- Aux position is for future expansion.

3 - Sofa Control Switch (4 button switch) is designed to provide access to sofa function controls from the seat area.
- One switch location can operate each directional feature of the sofa.

UP	DOWN
FORWARD	BACK

- Switch is available in a 2 button configuration (UP and DOWN)
- All sofa switch functions can be "Locked Out" by Driver Main Switch Panel.
- "Lock Out" feature will default to operational when the ignition is turned off.

Main Switch Panel Function Position Reassignment Program

This will allow the reassignment of each button function. The factory assigned switch functions remain a permanent base for each switch position.

These preset positions are:

Top, left to right	**1 - Mood lights**	**2 - Read Lights**	**3 - TV Power**
Bottom, left to right	**4 - Sofa Lock**	**5 - Auxlliary**	**6 - TV/Radio Mute**

Step 1 The reassignment program is activated when the DECC panel light is depressed and held for 20 seconds. The MSP will give an audible alert advising that the system is ready for reassignment.

Step 2 The #1 switch position LED color will change advising that this is the start point. Push the specific button to assign position #1 (i.e. to move TV Power function to position #1 push switch #3, TV power will operate at position #1)

Step 3 The next button LED will change color advising that the last selection was accepted and the next position is ready for reassignment. (i.e. to assign sofa lock to position #2 push sofa lock button #4, position #2 will now operate sofa lock feature).

Step 4 Follow each step as before to reassign each new function and position.

Step 5 After reassigning button #6 the MSP will give an other audible alert advising that the switch reassignments have been accepted.

NOTE - If you desire to return the factory preset positions start the reassignment program as stated in step #1. The LED will change color, push button #1 to recover the factory preset.

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AMP DRAW for 1998 EMI LE/LX Harness in Full Size vans and Astros

1. Accessory One (ignition) — 15 Amp Fuse

5 Thermotronics
1 Audio Amp
1 Rear Radio — Draws 8.25 Amps

2. Accessory Two (Ignition) — 15 Amp Fuse

Open for future expansion

3. Accessory Three (Battery) — 15 Amp fuse

5 Power Outputs (Cell Phone)
1 Rear Radio
1 Air Pump — Draws 3.80 Amps

4. Accessory Four (Battery) — 15 Amp Fuse

Open for future expansion

5. Courtesy — 15 Amp Fuse

8 Overhead Lights
and Step Well Light — Draws 4.01 Amps

6. Read Light — 5 Amp Fuse

1 Overhead light — Draws .69 Amps

7. Read Light — 5 Amp Fuse

1 Overhead Light — Draws .69 Amps

8. Read Light — 5 Amp Fuse

1 Overhead Light — Draws .69 Amps

9. Read Light — 5 Amp Fuse

1 Overhead light — Draws .69 Amps

10. Mood Light — 7.5 Amp Fuse

1 Center Light Beam
Mood Light Above and
Below each Window — Draws 4.79 Amps

11. Accessory (TV/VCP) — 7.5 Amp fuse

1 TV
1 VCP (playing) — Draws 3.40 Amps

12. Accessory — 15 Amp Fuse

Open for future expansion

13. Accessory — 15 Amp Fuse

Open for future expansion

14. Accessory — 15 Amp Fuse

1 Overhead light — Draws .69 Amps

15. Power Seat — 25 Amp Fuse (factory)

1 Driver side — Draws 4.23 Amps
1 Passenger side — Draws 4.23 Amps

16. Power Sofa — 30 Amp Fuse

1 Sofa — Draws 22.5 to 35.0 Amps

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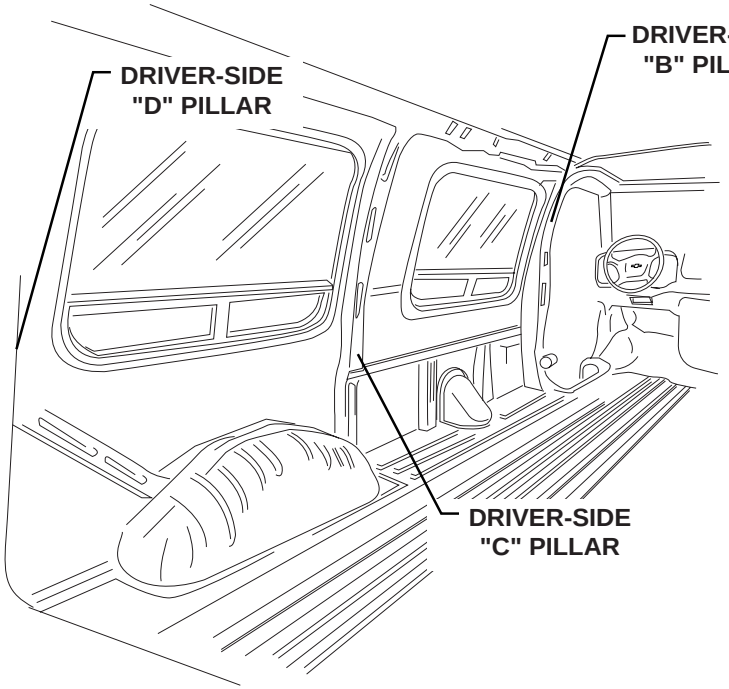
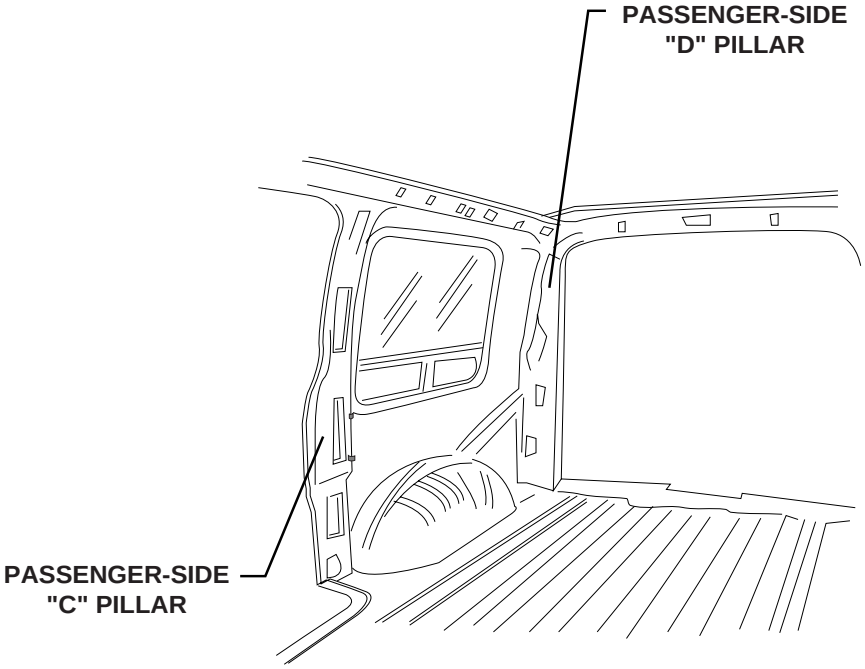


DRIVER SIDE VIEW



PASSENGER SIDE VIEW

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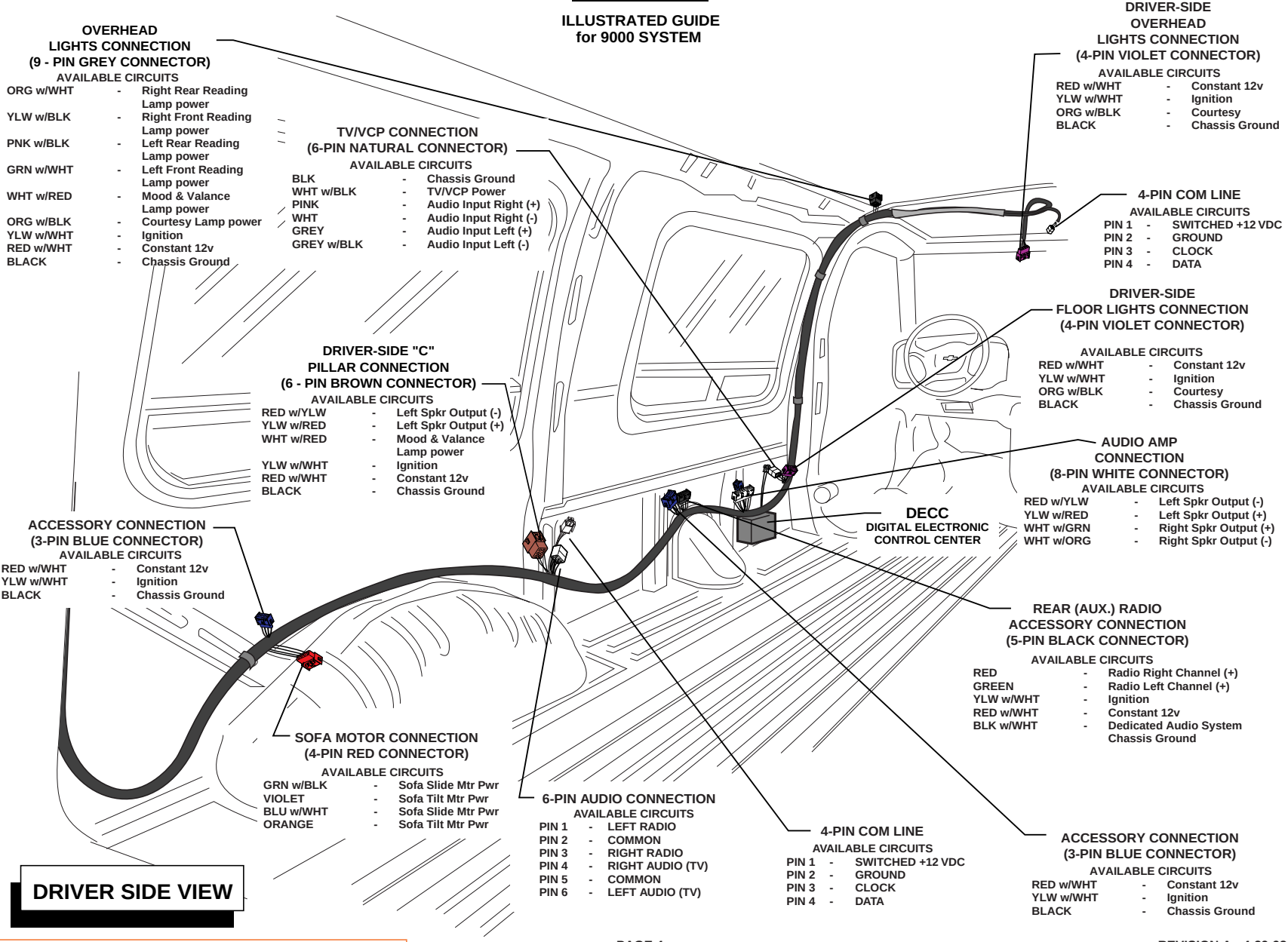

OVERHEAD LIGHTS CONNECTION (9 - PIN GREY CONNECTOR)

AVAILABLE CIRCUITS

ORG w/WHT	-	Right Rear Reading Lamp power
YLW w/BLK	-	Right Front Reading Lamp power
PNK w/BLK	-	Left Rear Reading Lamp power
GRN w/WHT	-	Left Front Reading Lamp power
WHT w/RED	-	Mood & Valance Lamp power
ORG w/BLK	-	Courtesy Lamp power
YLW w/WHT	-	Ignition
RED w/WHT	-	Constant 12v
BLACK	-	Chassis Ground

TV/VCP CONNECTION (6-PIN NATURAL CONNECTOR)

AVAILABLE CIRCUITS

BLK	-	Chassis Ground
WHT w/BLK	-	TV/VCP Power
PINK	-	Audio Input Right (+)
WHT	-	Audio Input Right (-)
GREY	-	Audio Input Left (+)
GREY w/BLK	-	Audio Input Left (-)

DRIVER-SIDE "C" PILLAR CONNECTION (6 - PIN BROWN CONNECTOR)

AVAILABLE CIRCUITS

RED w/YLW	-	Left Spkr Output (-)
YLW w/RED	-	Left Spkr Output (+)
WHT w/RED	-	Mood & Valance Lamp power
YLW w/WHT	-	Ignition
RED w/WHT	-	Constant 12v
BLACK	-	Chassis Ground

ACCESSORY CONNECTION (3-PIN BLUE CONNECTOR)

AVAILABLE CIRCUITS

RED w/WHT	-	Constant 12v
YLW w/WHT	-	Ignition
BLACK	-	Chassis Ground

SOFA MOTOR CONNECTION (4-PIN RED CONNECTOR)

AVAILABLE CIRCUITS

GRN w/BLK	-	Sofa Slide Mtr Pwr
VIOLET	-	Sofa Tilt Mtr Pwr
BLU w/WHT	-	Sofa Slide Mtr Pwr
ORANGE	-	Sofa Tilt Mtr Pwr

6-PIN AUDIO CONNECTION

AVAILABLE CIRCUITS

PIN 1	-	LEFT RADIO
PIN 2	-	COMMON
PIN 3	-	RIGHT RADIO
PIN 4	-	RIGHT AUDIO (TV)
PIN 5	-	COMMON
PIN 6	-	LEFT AUDIO (TV)

DRIVER SIDE VIEW

DRIVER-SIDE OVERHEAD LIGHTS CONNECTION (4-PIN VIOLET CONNECTOR)

AVAILABLE CIRCUITS

RED w/WHT	-	Constant 12v
YLW w/WHT	-	Ignition
ORG w/BLK	-	Courtesy
BLACK	-	Chassis Ground

4-PIN COM LINE

AVAILABLE CIRCUITS

PIN 1	-	SWITCHED +12 VDC
PIN 2	-	GROUND
PIN 3	-	CLOCK
PIN 4	-	DATA

DRIVER-SIDE FLOOR LIGHTS CONNECTION (4-PIN VIOLET CONNECTOR)

AVAILABLE CIRCUITS

RED w/WHT	-	Constant 12v
YLW w/WHT	-	Ignition
ORG w/BLK	-	Courtesy
BLACK	-	Chassis Ground

AUDIO AMP CONNECTION (8-PIN WHITE CONNECTOR)

AVAILABLE CIRCUITS

RED w/YLW	-	Left Spkr Output (-)
YLW w/RED	-	Left Spkr Output (+)
WHT w/GRN	-	Right Spkr Output (+)
WHT w/ORG	-	Right Spkr Output (-)

DECC

DIGITAL ELECTRONIC CONTROL CENTER

REAR (AUX.) RADIO ACCESSORY CONNECTION (5-PIN BLACK CONNECTOR)

AVAILABLE CIRCUITS

RED	-	Radio Right Channel (+)
GREEN	-	Radio Left Channel (+)
YLW w/WHT	-	Ignition
RED w/WHT	-	Constant 12v
BLK w/WHT	-	Dedicated Audio System Chassis Ground

4-PIN COM LINE

AVAILABLE CIRCUITS

PIN 1	-	SWITCHED +12 VDC
PIN 2	-	GROUND
PIN 3	-	CLOCK
PIN 4	-	DATA

ACCESSORY CONNECTION (3-PIN BLUE CONNECTOR)

AVAILABLE CIRCUITS

RED w/WHT	-	Constant 12v
YLW w/WHT	-	Ignition
BLACK	-	Chassis Ground

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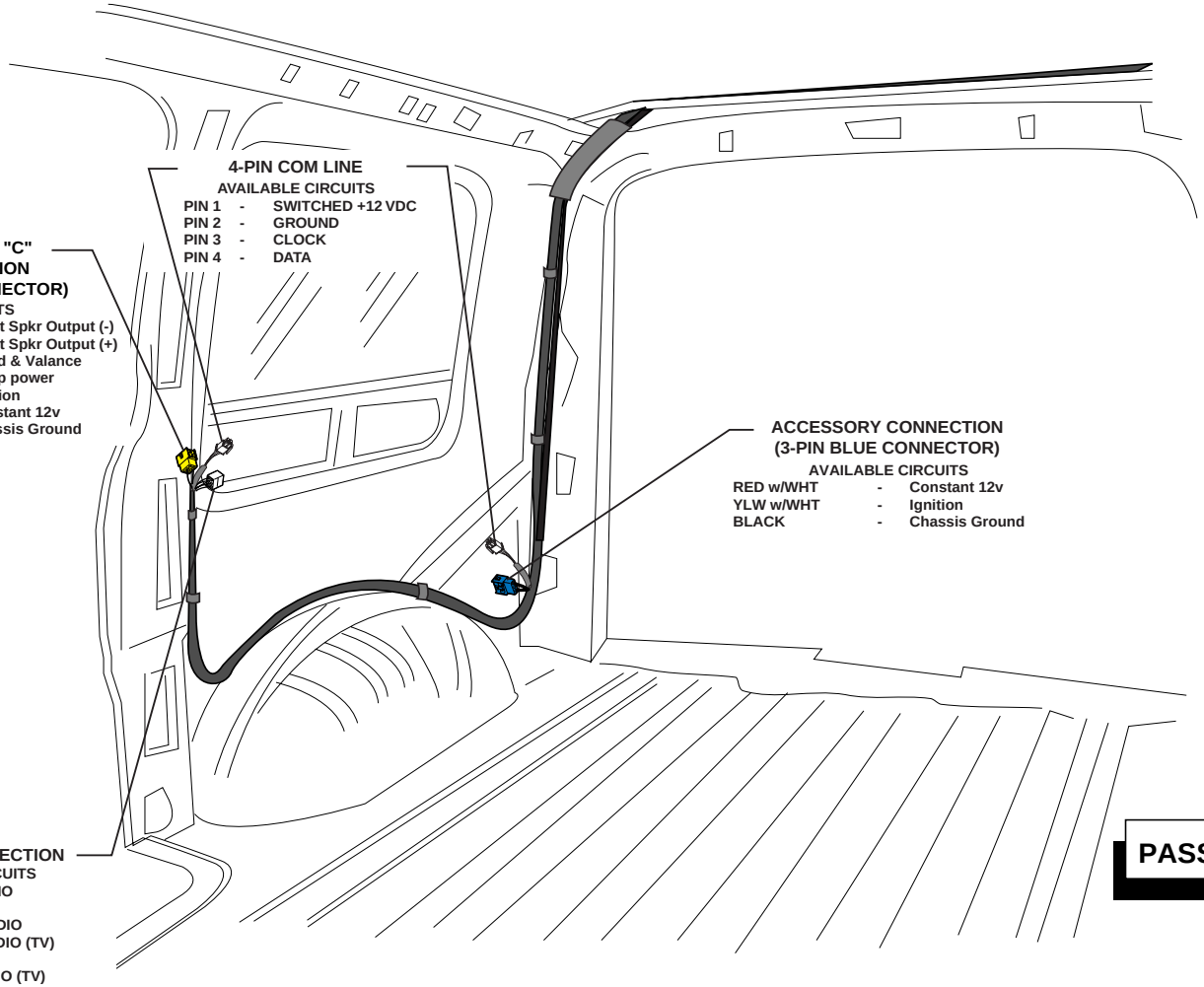
REVISION A - 4-29-98



4-PIN COM LINE
AVAILABLE CIRCUITS
PIN 1 - SWITCHED +12 VDC
PIN 2 - GROUND
PIN 3 - CLOCK
PIN 4 - DATA

PASSENGER-SIDE "C" PILLAR CONNECTION (6 - PIN YELLOW CONNECTOR)
AVAILABLE CIRCUITS
WHT w/GRN - Right Spkr Output (-)
WHT w/ORG - Right Spkr Output (+)
WHT w/RED - Mood & Valance Lamp power
YLW w/WHT - Ignition
RED w/WHT - Constant 12v
BLACK - Chassis Ground

ACCESSORY CONNECTION (3-PIN BLUE CONNECTOR)
AVAILABLE CIRCUITS
RED w/WHT - Constant 12v
YLW w/WHT - Ignition
BLACK - Chassis Ground

6-PIN AUDIO CONNECTION
AVAILABLE CIRCUITS
PIN 1 - LEFT RADIO
PIN 2 - COMMON
PIN 3 - RIGHT RADIO
PIN 4 - RIGHT AUDIO (TV)
PIN 5 - COMMON
PIN 6 - LEFT AUDIO (TV)

PASSENGER SIDE VIEW

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TO REAR RADIO
(12-PIN WHITE CONNECTOR)

AVAILABLE CIRCUITS

RED w/WHT	-	Constant 12V
YLW w/WHT	-	Ignition
RED	-	Aux. Radio Right Channel (+)
GRN	-	Aux. Radio Left Channel (+)
BLK	-	Chassis Ground

FRONT ACCESSORY HARNESS
P.N. 02-76013

TO CD MODULE
(3-PIN BLUE CONNECTOR)

AVAILABLE CIRCUITS

YLW w/WHT	-	Ignition
RED w/WHT	-	Constant 12V
BLK	-	Chassis Ground

TO AUXILLARY
(2-PIN GREEN CONNECTOR)

AVAILABLE CIRCUITS

GRN	-	Switched Auxillary Power
BLK	-	Chassis Ground

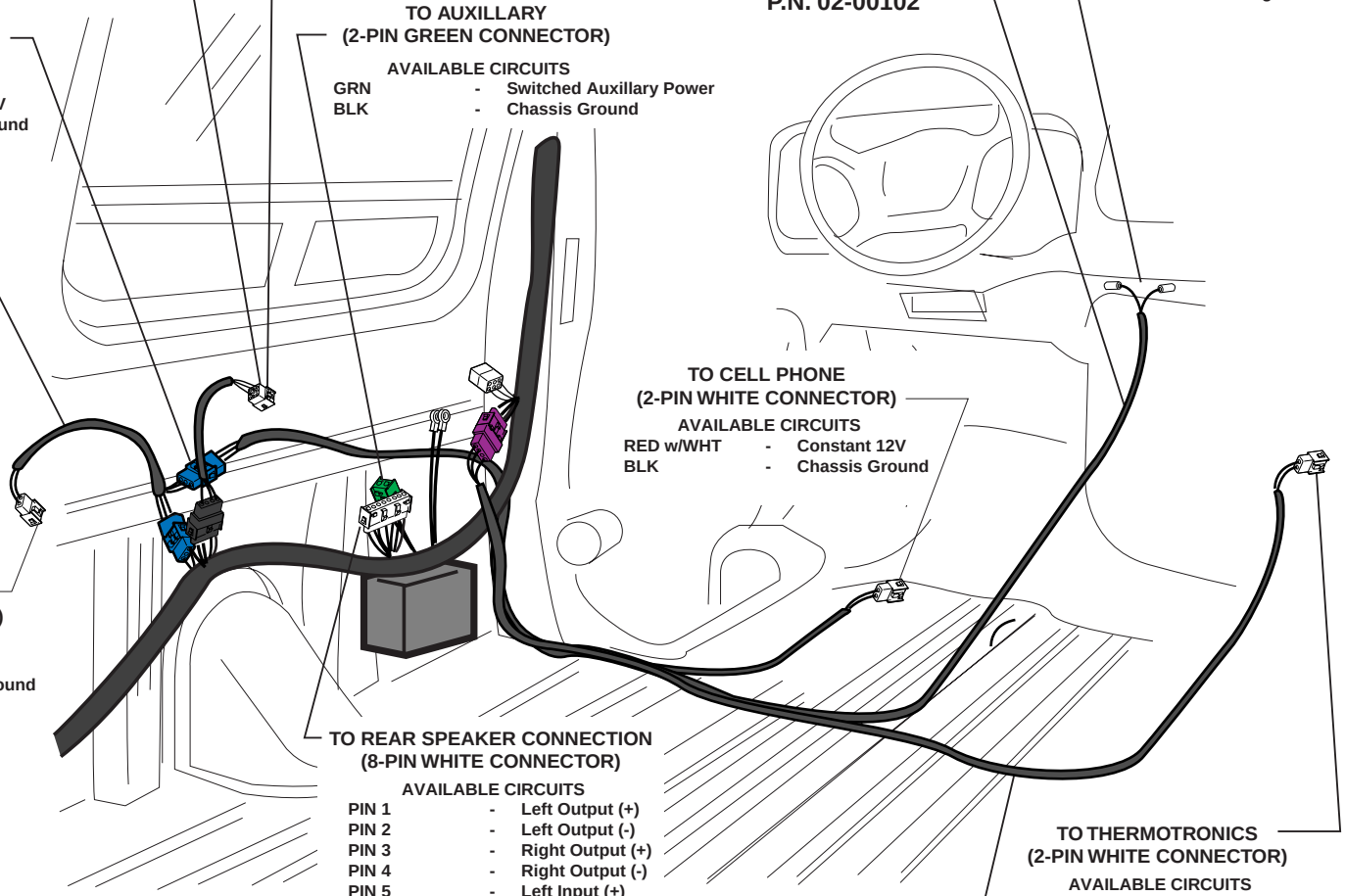
CD POWER FEED HARNESS
P.N. 02-00102

TO CD PLAYER

AVAILABLE CIRCUITS

RED w/WHT	-	Constant 12V
YLW w/WHT	-	Ignition

FRONT ACCESSORY HARNESS
P.N. 02-76013



TO CELL PHONE
(2-PIN WHITE CONNECTOR)

AVAILABLE CIRCUITS

RED w/WHT	-	Constant 12V
BLK	-	Chassis Ground

TO GAME CENTER
(2-PIN WHITE CONNECTOR)

AVAILABLE CIRCUITS

YLW w/WHT	-	Ignition
BLK	-	Chassis Ground

TO REAR SPEAKER CONNECTION
(8-PIN WHITE CONNECTOR)

AVAILABLE CIRCUITS

PIN 1	-	Left Output (+)
PIN 2	-	Left Output (-)
PIN 3	-	Right Output (+)
PIN 4	-	Right Output (-)
PIN 5	-	Left Input (+)
PIN 6	-	Left Input (-)
PIN 7	-	Right Input (+)
PIN 8	-	Right Input (-)

TO THERMOTRONICS
(2-PIN WHITE CONNECTOR)

AVAILABLE CIRCUITS

YLW w/WHT	-	Ignition
BLK	-	Chassis Ground

DRIVER SIDE FLOOR HARNESS
P.N. 02-76005

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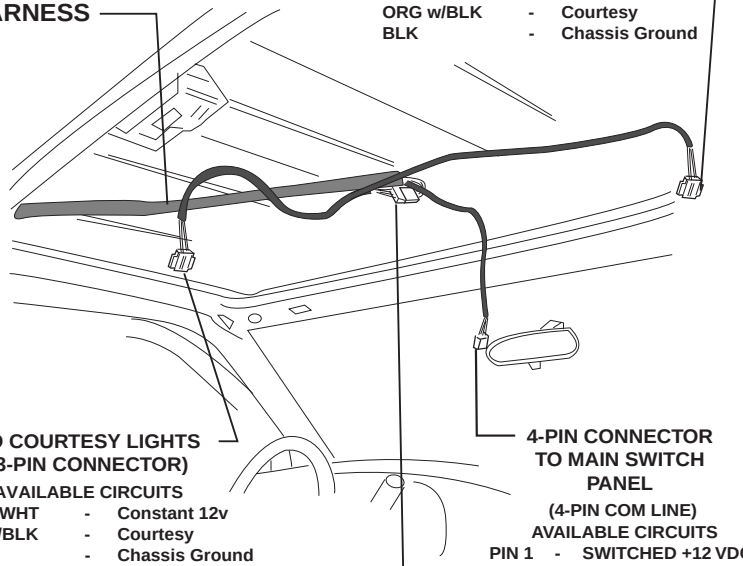
DRIVER OVERHEAD HARNESS P.N. 02-76004



MAIN HARNESS

TO PASSENGER SIDE VISOR LIGHTS (3-PIN CONNECTOR)

AVAILABLE CIRCUITS

RED w/WHT	-	Constant 12v
ORG w/BLK	-	Courtesy
BLK	-	Chassis Ground

TO COURTESY LIGHTS (3-PIN CONNECTOR)

AVAILABLE CIRCUITS

RED w/WHT	-	Constant 12v
ORG w/BLK	-	Courtesy
BLK	-	Chassis Ground

4-PIN CONNECTOR TO MAIN SWITCH PANEL

(4-PIN COM LINE)

AVAILABLE CIRCUITS

PIN 1	-	SWITCHED +12 VDC
PIN 2	-	GROUND
PIN 3	-	CLOCK
PIN 4	-	DATA

TO MAIN HARNESS CONNECTION (4-PIN VIOLET CONNECTOR)

AVAILABLE CIRCUITS

RED w/WHT	-	Constant 12v
YLW w/WHT	-	Ignition
ORG w/BLK	-	Courtesy
BLK	-	Chassis Ground

TO CARGO LIGHTS (3-PIN CONNECTOR)

AVAILABLE CIRCUITS

RED w/WHT	-	Constant 12v
ORG w/BLK	-	Courtesy
BLK	-	Chassis Ground

TO READING LIGHTS (3-PIN CONNECTOR)

AVAILABLE CIRCUITS

ORG w/WHT	-	Right Rear Reading Lamp Power
ORG w/BLK	-	Courtesy
BLK	-	Chassis Ground

CEILING LIGHTS HARNESS P.N. 02-76016

TO READING LIGHTS (3-PIN CONNECTOR)

AVAILABLE CIRCUITS

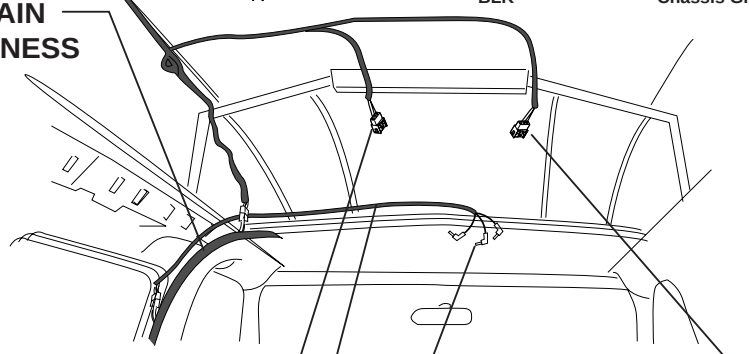
PNK w/BLK	-	Left Rear Reading Lamp Power
ORG w/BLK	-	Courtesy
BLK	-	Chassis Ground

TO MOOD LIGHTS (1-PIN CONNECTOR)

AVAILABLE CIRCUITS

WHT w/RED	-	Mood & Valance Lamp Power
BLK	-	Chassis Ground

MAIN HARNESS



TO READING LIGHTS (3-PIN CONNECTOR)

AVAILABLE CIRCUITS

GRN w/WHT	-	Left Front Reading Lamp Power
ORG w/BLK	-	Courtesy
BLK	-	Chassis Ground

TO READING LIGHTS (3-PIN CONNECTOR)

AVAILABLE CIRCUITS

YLW w/BLK	-	Right Front Reading Lamp Power
ORG w/BLK	-	Courtesy
BLK	-	Chassis Ground

TV/VCP MODULE P.N. 02-76002

TO TV / VCP CONNECTION

AVAILABLE CIRCUITS

VCP POWER
TV POWER
TV AUDIO
NOISE FILTER - INPUT & OUTPUT

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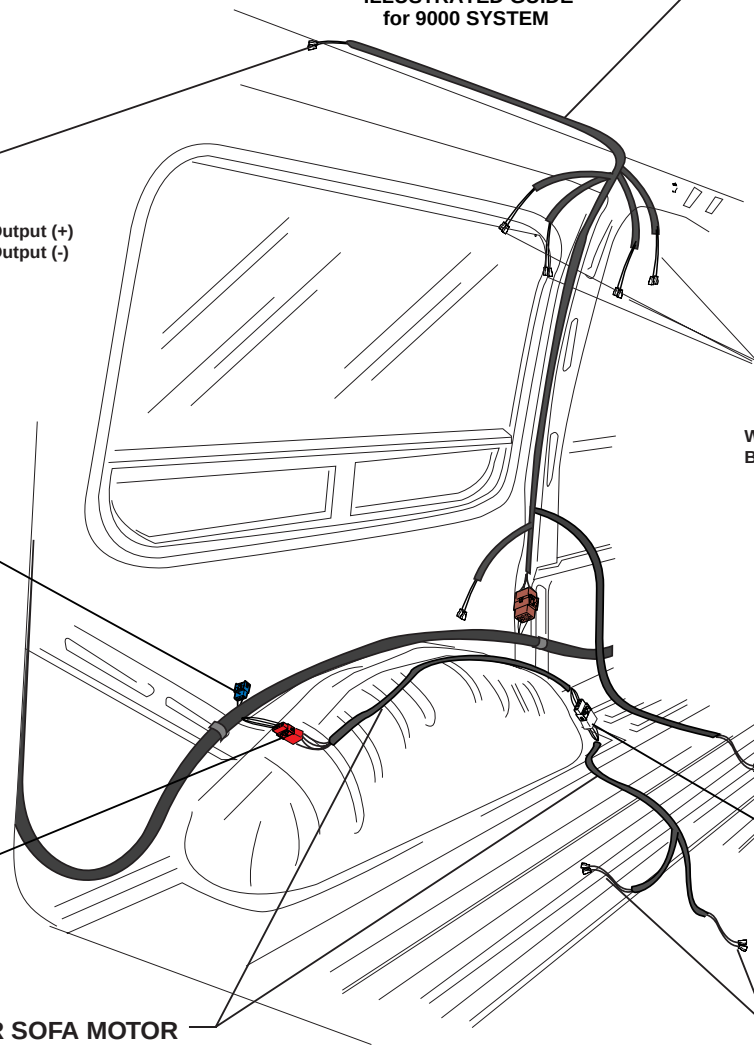

DRIVER SIDE "C" PILLAR HARNESS P.N. 02-76010

TO SPEAKERS (1-PIN TABS)

AVAILABLE CIRCUITS

YLW w/RED	-	Left Speaker Output (+)
RED w/YLW	-	Left Speaker Output (-)

TO MOOD LIGHTS (1-PIN TABS)

AVAILABLE CIRCUITS

WHT w/RED	-	Constant 12V
BLK	-	Chassis Ground

ACCESSORY CONNECTION (3-PIN BLUE CONNECTOR)

AVAILABLE CIRCUITS

RED w/WHT	-	Constant 12v
YLW w/WHT	-	Ignition
BLACK	-	Chassis Ground

TO SPEAKERS (1-PIN TABS)

AVAILABLE CIRCUITS

YLW w/RED	-	Left Speaker Output (+)
RED w/YLW	-	Left Speaker Output (-)

SOFA MOTOR CONNECTION (4-PIN RED CONNECTOR)

AVAILABLE CIRCUITS

GRN w/BLK	-	Sofa Slide Mtr Pwr
VIOLET	-	Sofa Tilt Mtr Pwr
BLU w/WHT	-	Sofa Slide Mtr Pwr
ORANGE	-	Sofa Tilt Mtr Pwr

POWER SOFA MOTOR MODULE (4-PIN NATURAL CONNECTOR)

AVAILABLE CIRCUITS

GRN w/BLK	-	Sofa Slide Mtr Pwr
VIOLET	-	Sofa Tilt Mtr Pwr
BLU w/WHT	-	Sofa Slide Mtr Pwr
ORANGE	-	Sofa Tilt Mtr Pwr

POWER SOFA MOTOR HARNESS P.N. 02-76009

TO POWER SOFA (1-PIN TABS)

AVAILABLE CIRCUITS

GRN w/BLK	-	Sofa Slide Mtr Pwr
BLU w/WHT	-	Sofa Slide Mtr Pwr
VIOLET	-	Sofa Tilt Mtr Pwr
ORANGE	-	Sofa Tilt Mtr Pwr

DRIVER-SIDE VIEW

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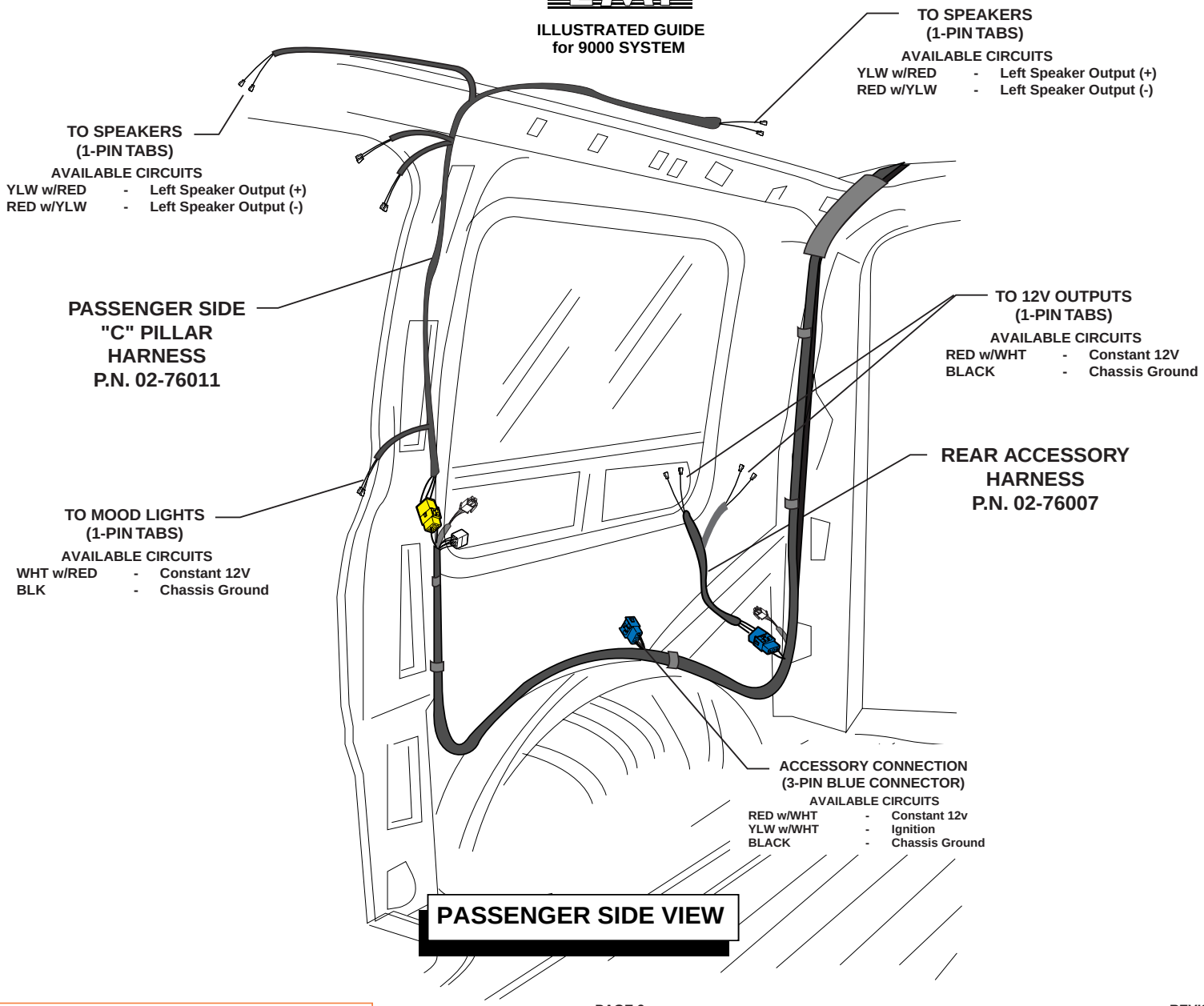

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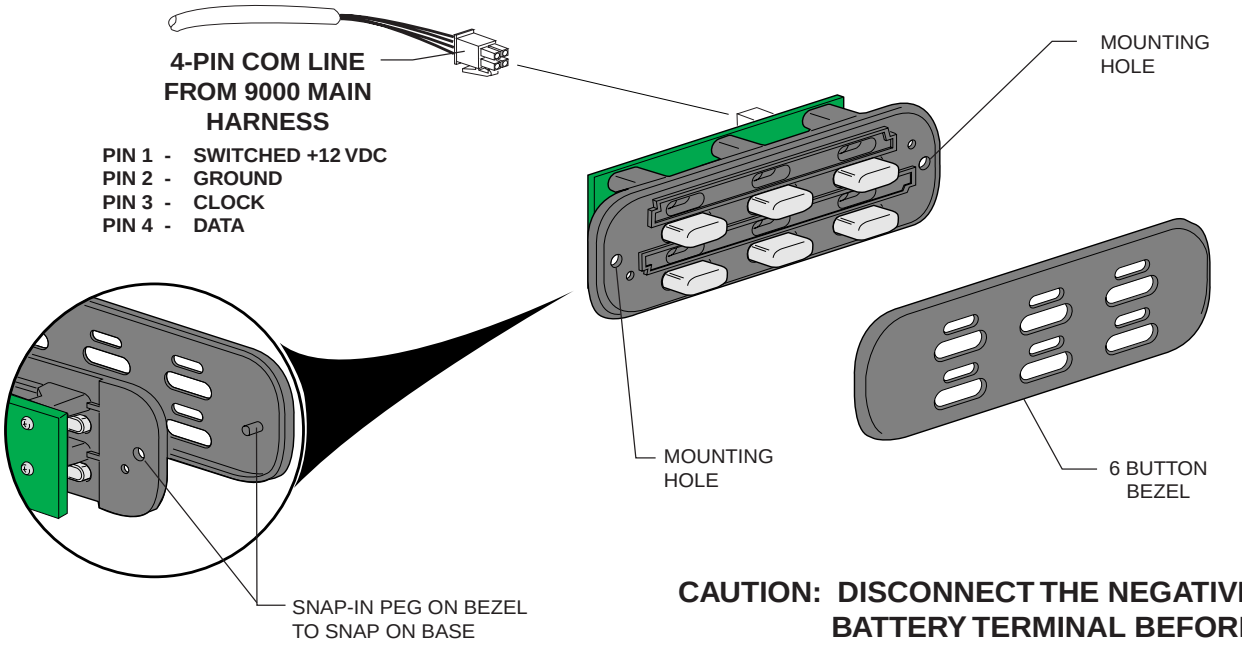
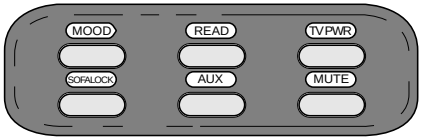
6 BUTTON MAIN SWITCH ASSEMBLY



CAUTION: DISCONNECT THE NEGATIVE (-) BATTERY TERMINAL BEFORE DISCONNECTING ANY SWITCHES

OPTION 1

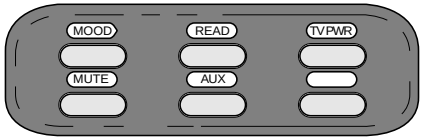


P.N. 03-00005 - 6 BUTTON MAIN SWITCH ASSEMBLY

EMI P.N. 22-00001 DECAL,UPPER 6 BUTTON MAIN (MRT)

EMI P.N. 22-00002 DECAL, LOWER 6 BUTTON MAIN (SAM)

OPTION 2

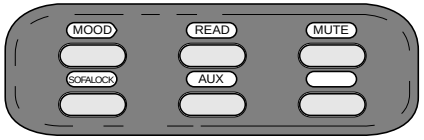


P.N. 03-00031 - 6 BUTTON MAIN SWITCH ASSEMBLY

EMI P.N. 22-00001 DECAL,UPPER 6 BUTTON MAIN (MRT)

EMI P.N. 22-00041 DECAL, LOWER 6 BUTTON MAIN (MAB)

OPTION 3



P.N. 03-00033 - 6 BUTTON MAIN SWITCH ASSEMBLY

EMI P.N. 22-00030 DECAL,UPPER 6 BUTTON MAIN (MRM)

EMI P.N. 22-00033 DECAL, LOWER 6 BUTTON MAIN (SAB)

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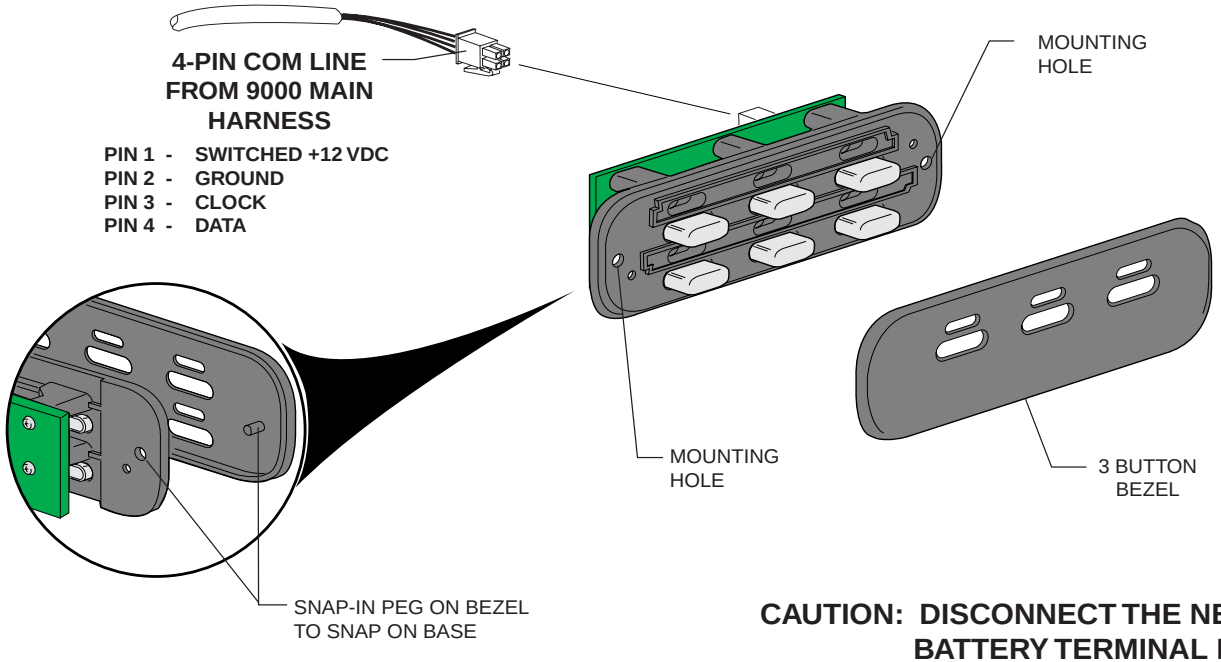
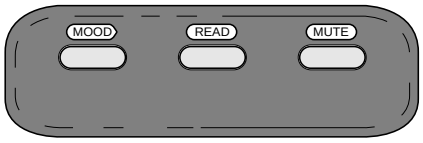
3 BUTTON MAIN SWITCH ASSEMBLY



CAUTION: DISCONNECT THE NEGATIVE (-) BATTERY TERMINAL BEFORE DISCONNECTING ANY SWITCHES



P.N. 03-00032 - 3 BUTTON MAIN SWITCH ASSEMBLY

EMI P.N. 22-00030 DECAL,UPPER 6 BUTTON MAIN (MRM)

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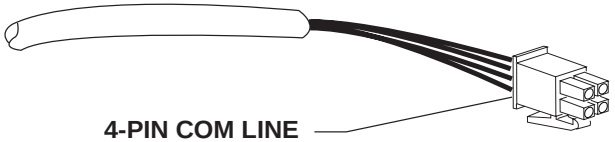
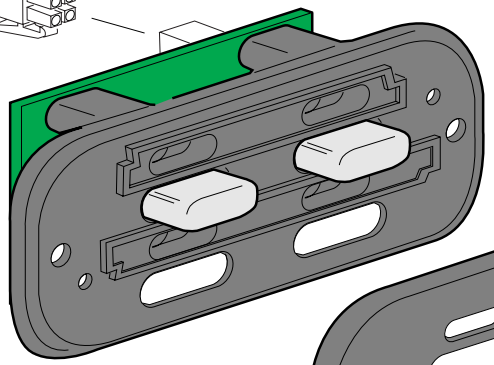
2 BUTTON SOFA SWITCH ASSEMBLY

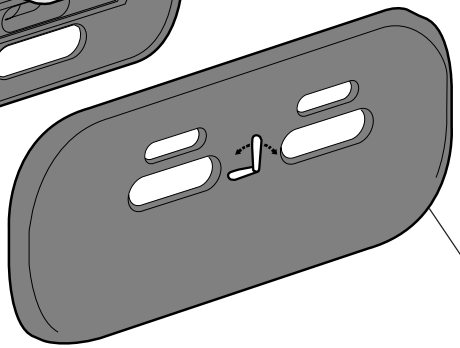


4-PIN COM LINE
(LOCATED ON PASSENGER-SIDE NEAR REAR WHEEL-WELL)

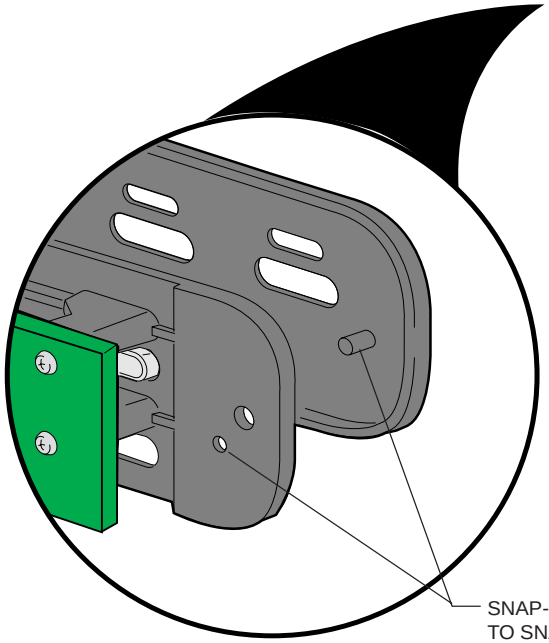
PIN 1 - SWITCHED +12 VDC
PIN 2 - GROUND
PIN 3 - CLOCK
PIN 4 - DATA

CAUTION: DISCONNECT THE NEGATIVE (-) BATTERY TERMINAL BEFORE DISCONNECTING ANY SWITCHES

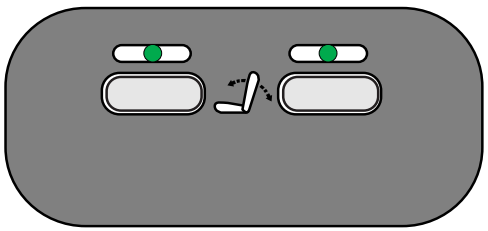




2 BUTTON BEZEL
WITH SOFA GRAPHICS



SNAP-IN PEG ON BEZEL
TO SNAP ON BASE



P.N. 03-00026 - 2 BUTTON SOFA SWITCH ASSEMBLY

UP DOWN

EMI P.N. 22-00003 DECAL,UPPER 4 BUTTON SOFA (UP/DOWN)

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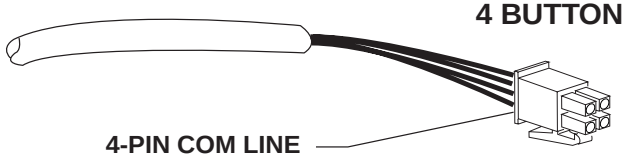
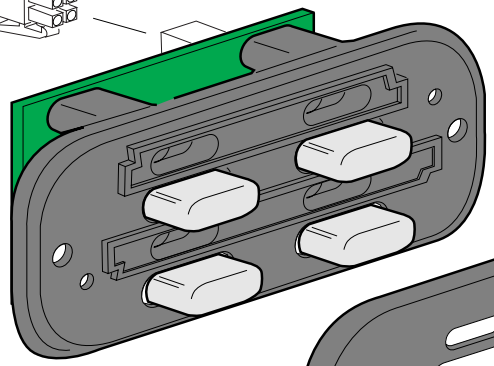
4 BUTTON SOFA SWITCH ASSEMBLY

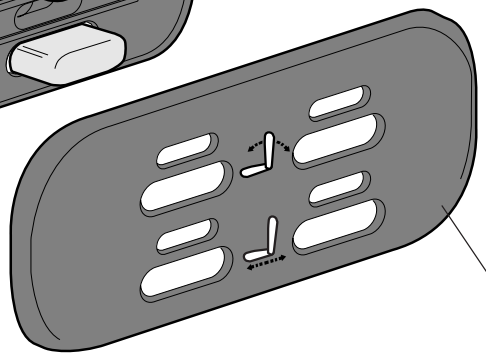


4-PIN COM LINE
(LOCATED ON PASSENGER-SIDE NEAR REAR WHEEL-WELL)

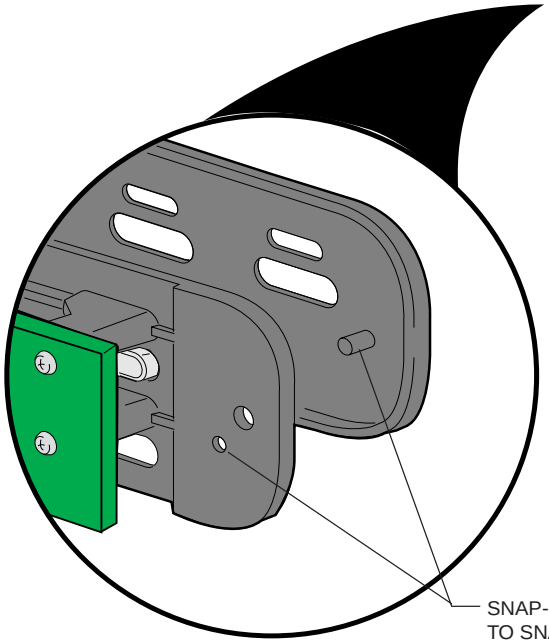
- **PIN 1 - SWITCHED +12 VDC**
- **PIN 2 - GROUND**
- **PIN 3 - CLOCK**
- **PIN 4 - DATA**

CAUTION: DISCONNECT THE NEGATIVE (-) BATTERY TERMINAL BEFORE DISCONNECTING ANY SWITCHES

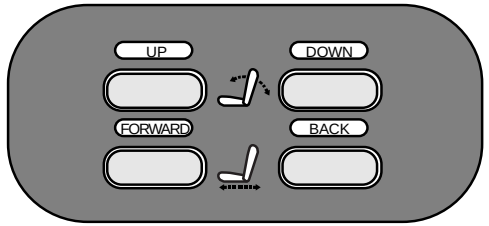




4 BUTTON BEZEL
WITH SOFA GRAPHICS



SNAP-IN PEG ON BEZEL
TO SNAP ON BASE



P.N. 03-00027 - 4 BUTTON SOFA SWITCH ASSEMBLY

EMI P.N. 22-00003 DECAL,UPPER 4 BUTTON SOFA (UP/DOWN)

EMI P.N. 22-00004 DECAL,LOWER 4 BUTTON SOFA (FOWARD/BACK)

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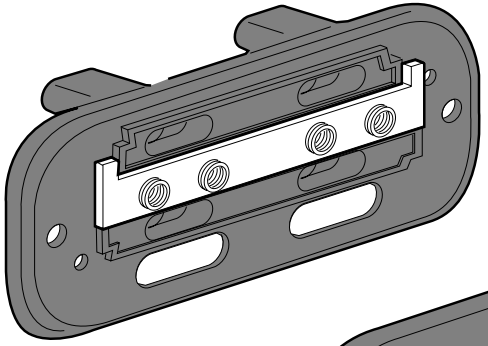
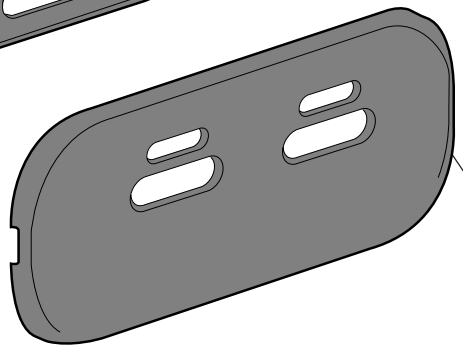
TV/RADIO - TV/RADIO ASSEMBLY

6-PIN AUDIO CONNECTOR
(LOCATED ON DRIVER & PASSENGER-SIDE NEAR REAR WHEEL-WELL)

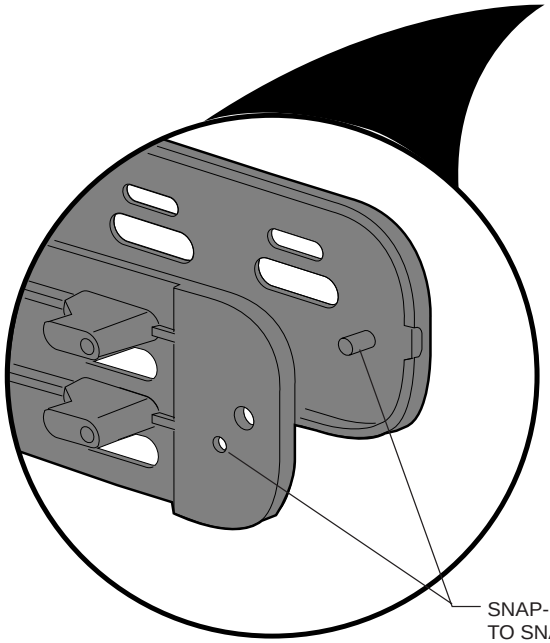
- **PIN 1 - LEFT RADIO**
- **PIN 2 - COMMON**
- **PIN 3 - RIGHT RADIO**
- **PIN 4 - RIGHT AUDIO (TV)**
- **PIN 5 - COMMON**
- **PIN 6 - LEFT AUDIO (TV)**

CAUTION: DISCONNECT THE NEGATIVE (-) BATTERY TERMINAL BEFORE DISCONNECTING ANY SWITCHES

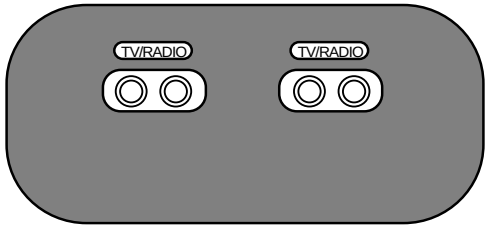




2 BUTTON BEZEL



SNAP-IN PEG ON BEZEL
TO SNAP ON BASE



P.N. 03-00021 - TV/RADIO - TV/RADIO STATION

EMI P.N. 22-00027 DECAL,UPPER AUDIO (TV/RADIO - TV/RADIO)

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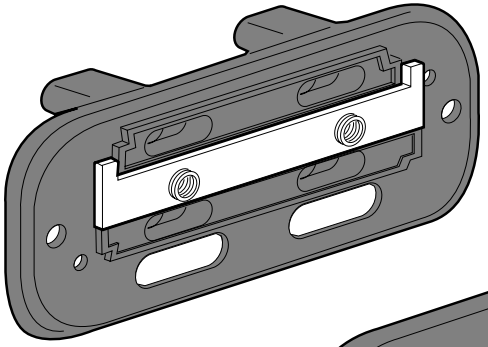
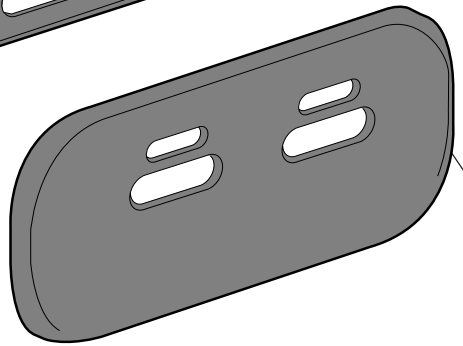
TV - TV STATION ASSEMBLY

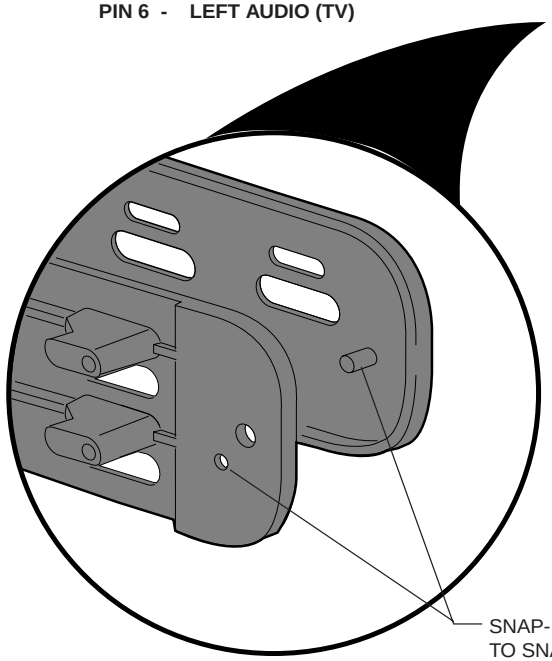
6-PIN AUDIO CONNECTOR
(LOCATED ON DRIVER & PASSENGER-SIDE NEAR REAR WHEEL-WELL)

PIN 1 - LEFT RADIO
PIN 2 - COMMON
PIN 3 - RIGHT RADIO
PIN 4 - RIGHT AUDIO (TV)
PIN 5 - COMMON
PIN 6 - LEFT AUDIO (TV)

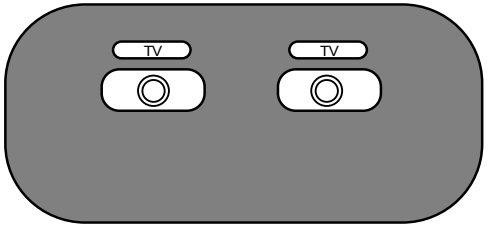




2 BUTTON BEZEL



SNAP-IN PEG ON BEZEL
TO SNAP ON BASE



P.N. 03-00025 - TV - TV STATION

EMI P.N. 22-00019 DECAL,UPPER AUDIO (TV - TV)

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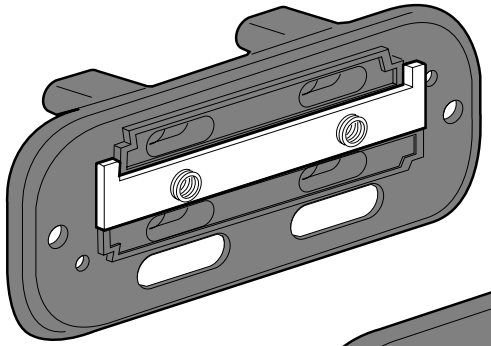
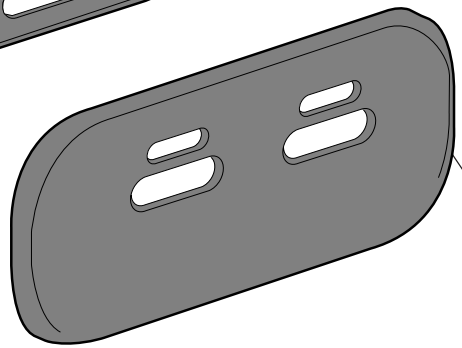
RADIO - RADIO STATION ASSEMBLY

6-PIN AUDIO CONNECTOR
(LOCATED ON DRIVER & PASSENGER-SIDE NEAR REAR WHEEL-WELL)

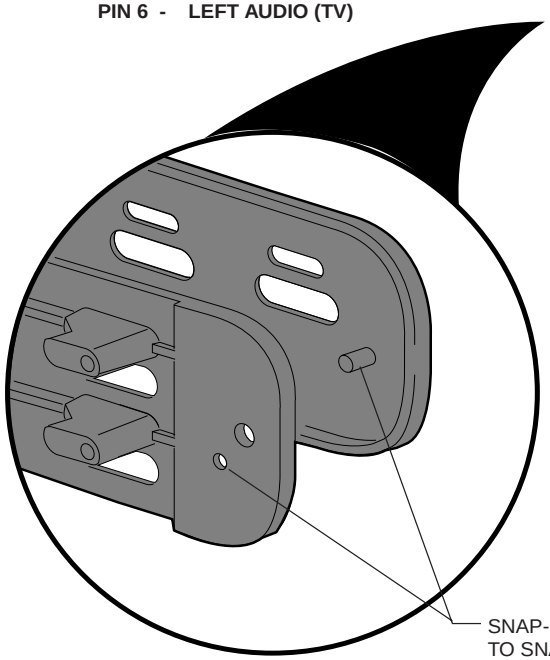
- PIN 1 - LEFT RADIO
- PIN 2 - COMMON
- PIN 3 - RIGHT RADIO
- PIN 4 - RIGHT AUDIO (TV)
- PIN 5 - COMMON
- PIN 6 - LEFT AUDIO (TV)

CAUTION: DISCONNECT THE NEGATIVE (-) BATTERY TERMINAL BEFORE DISCONNECTING ANY SWITCHES

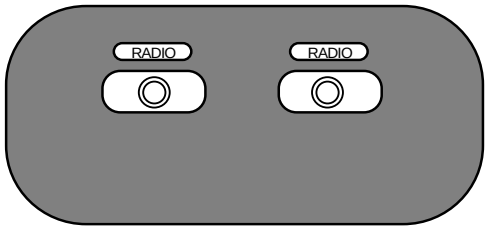




2 BUTTON BEZEL



SNAP-IN PEG ON BEZEL
TO SNAP ON BASE



P.N. 03-00030 - RADIO - RADIO STATION

EMI P.N. 22-00032 DECAL,UPPER AUDIO (RADIO - RADIO)

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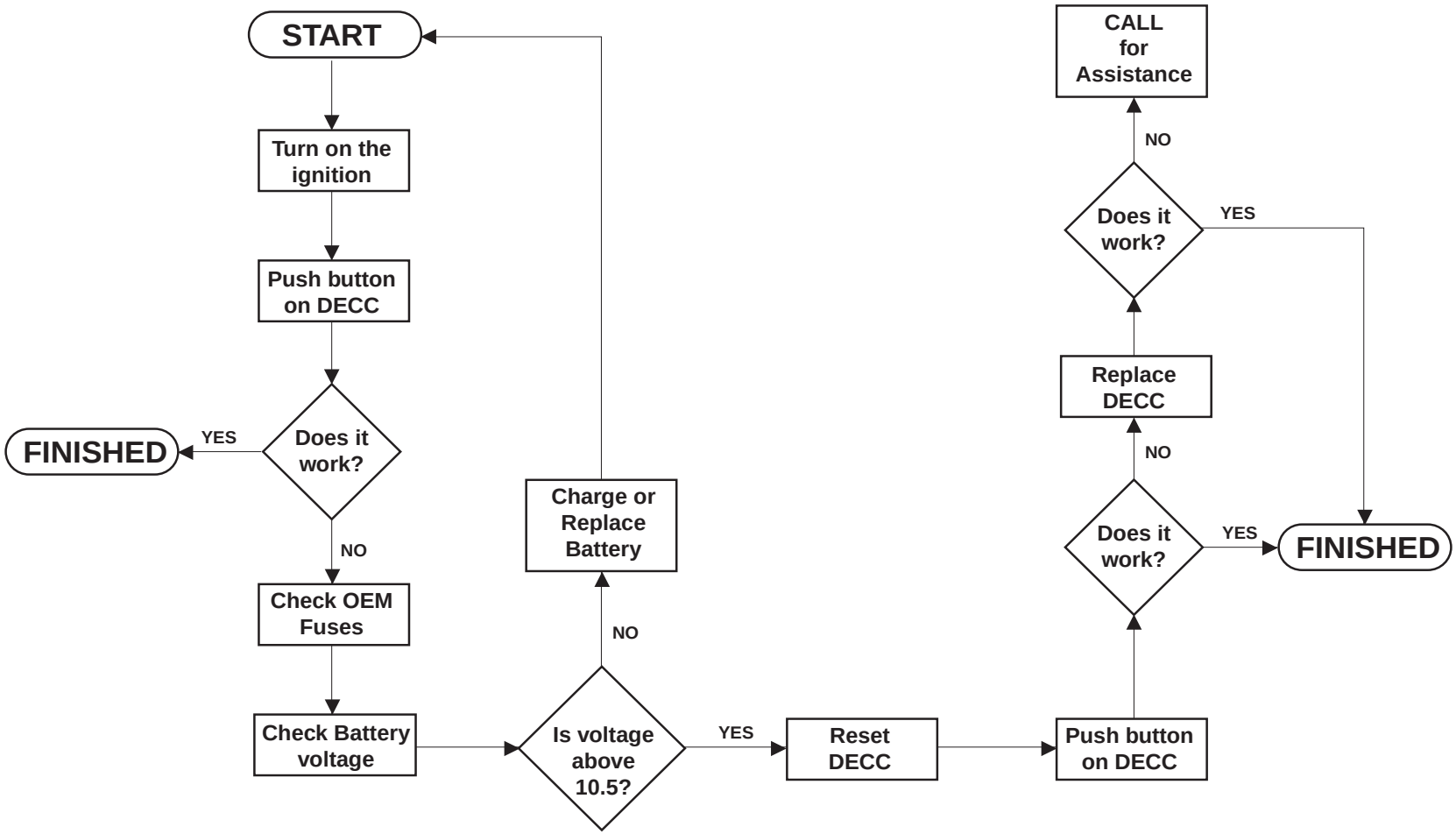
DECC

Troubleshooting Flowchart



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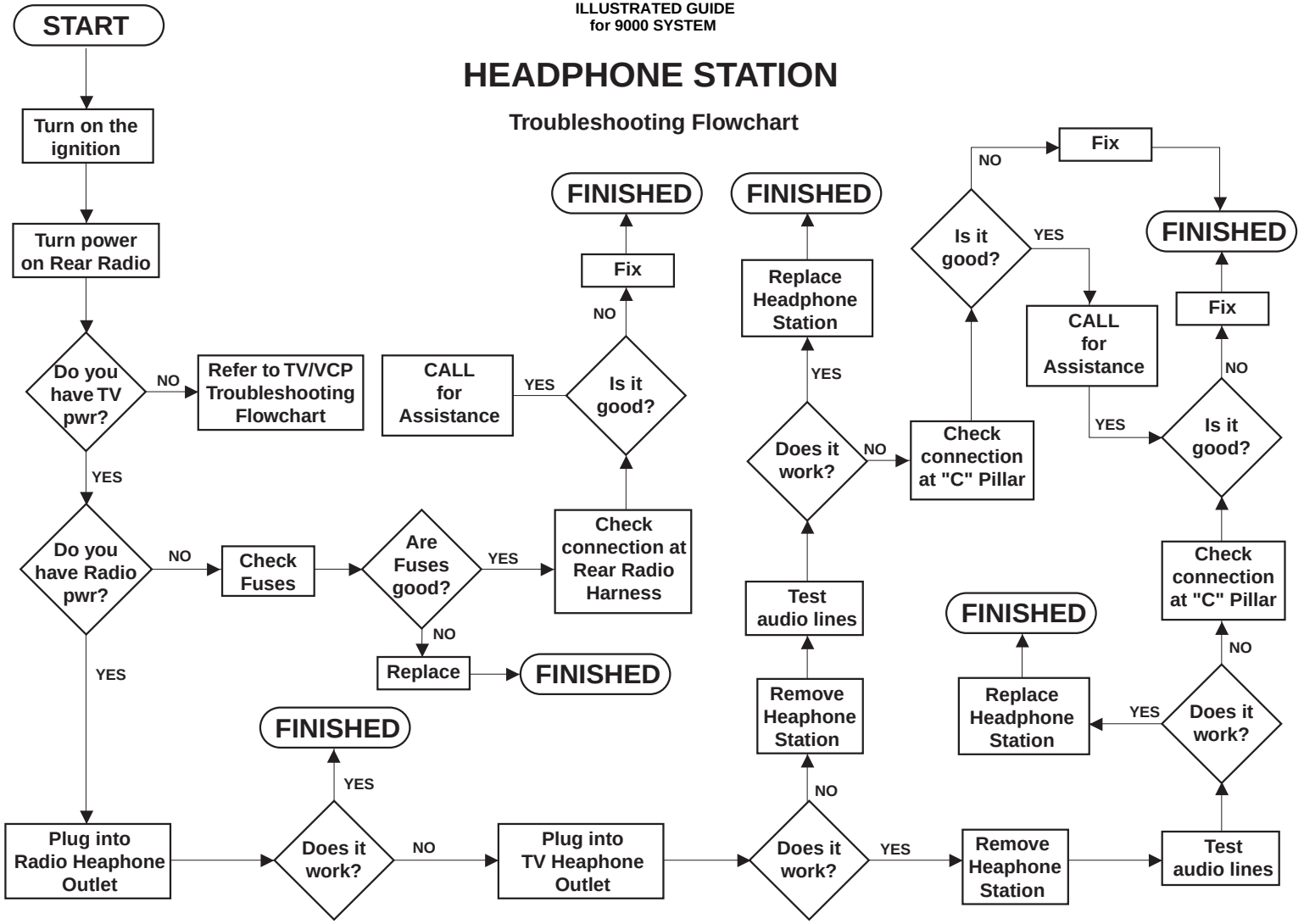
HEADPHONE STATION

Troubleshooting Flowchart



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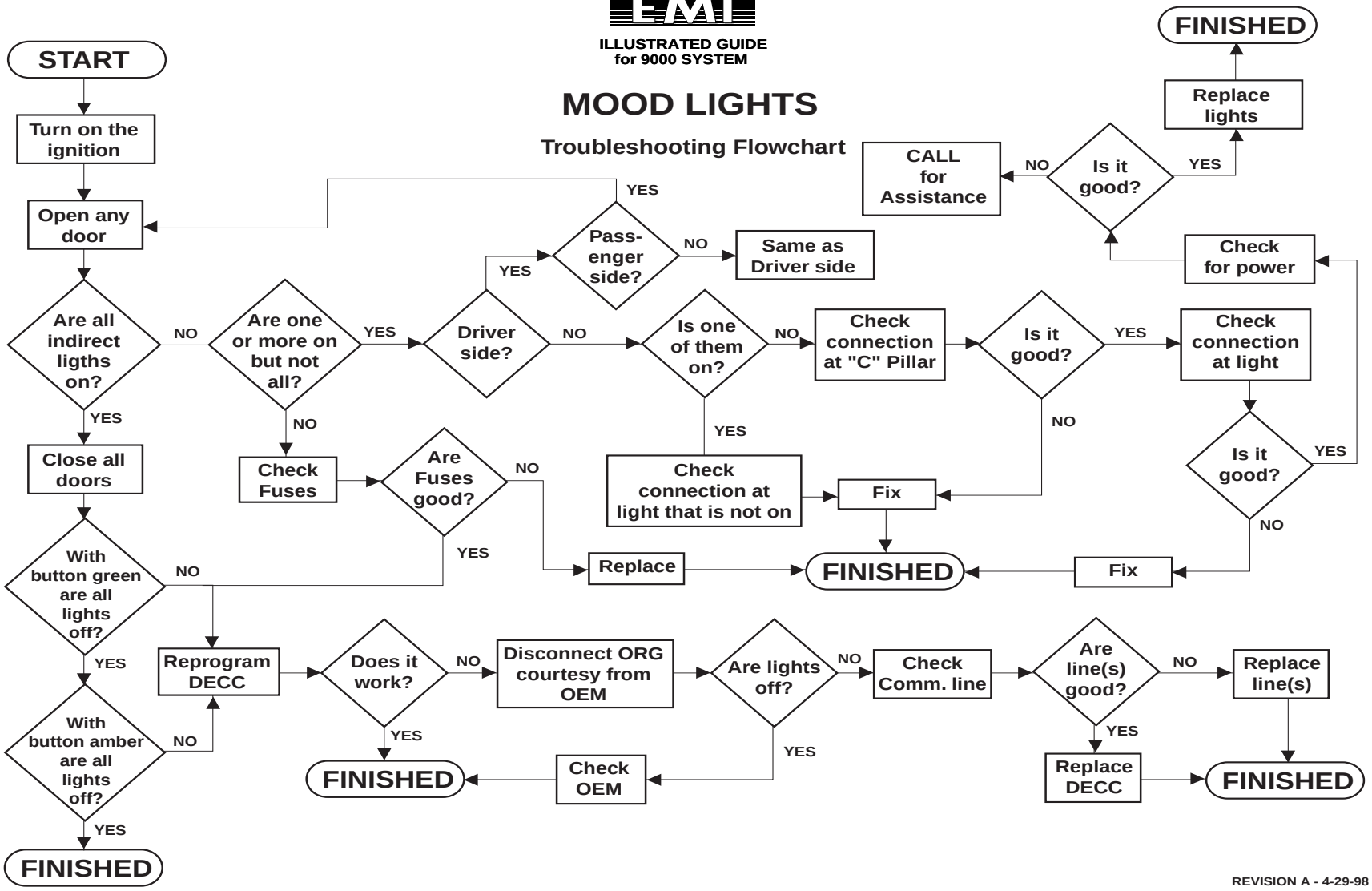
Plug into Radio Heaphone Outlet

MOOD LIGHTS

Troubleshooting Flowchart



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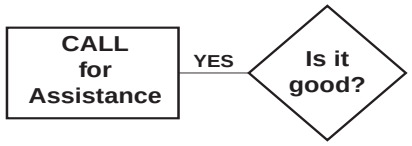
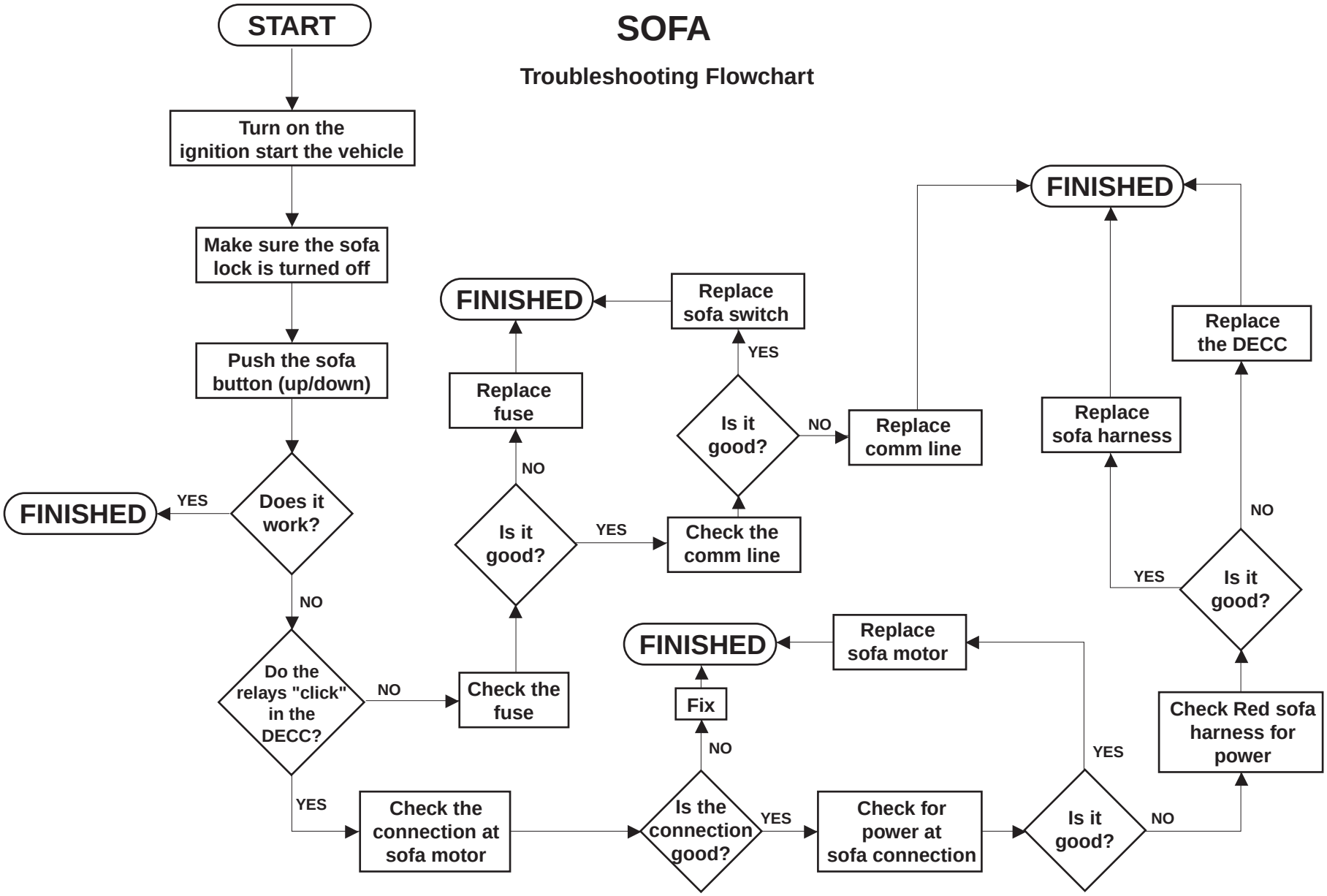


SOFA

Troubleshooting Flowchart



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EMI

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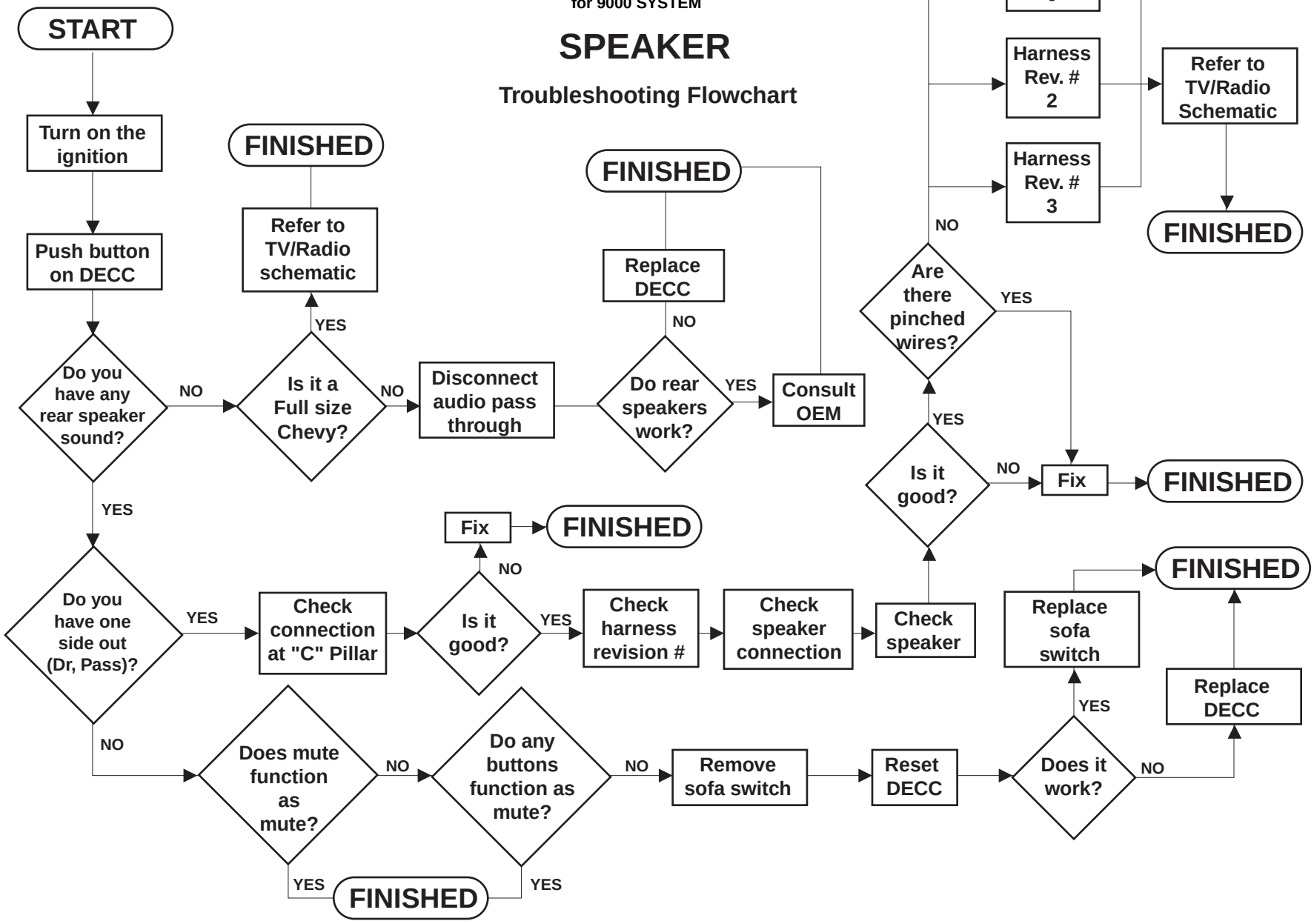
for 9000 SYSTEM

SPEAKER

Troubleshooting Flowchart



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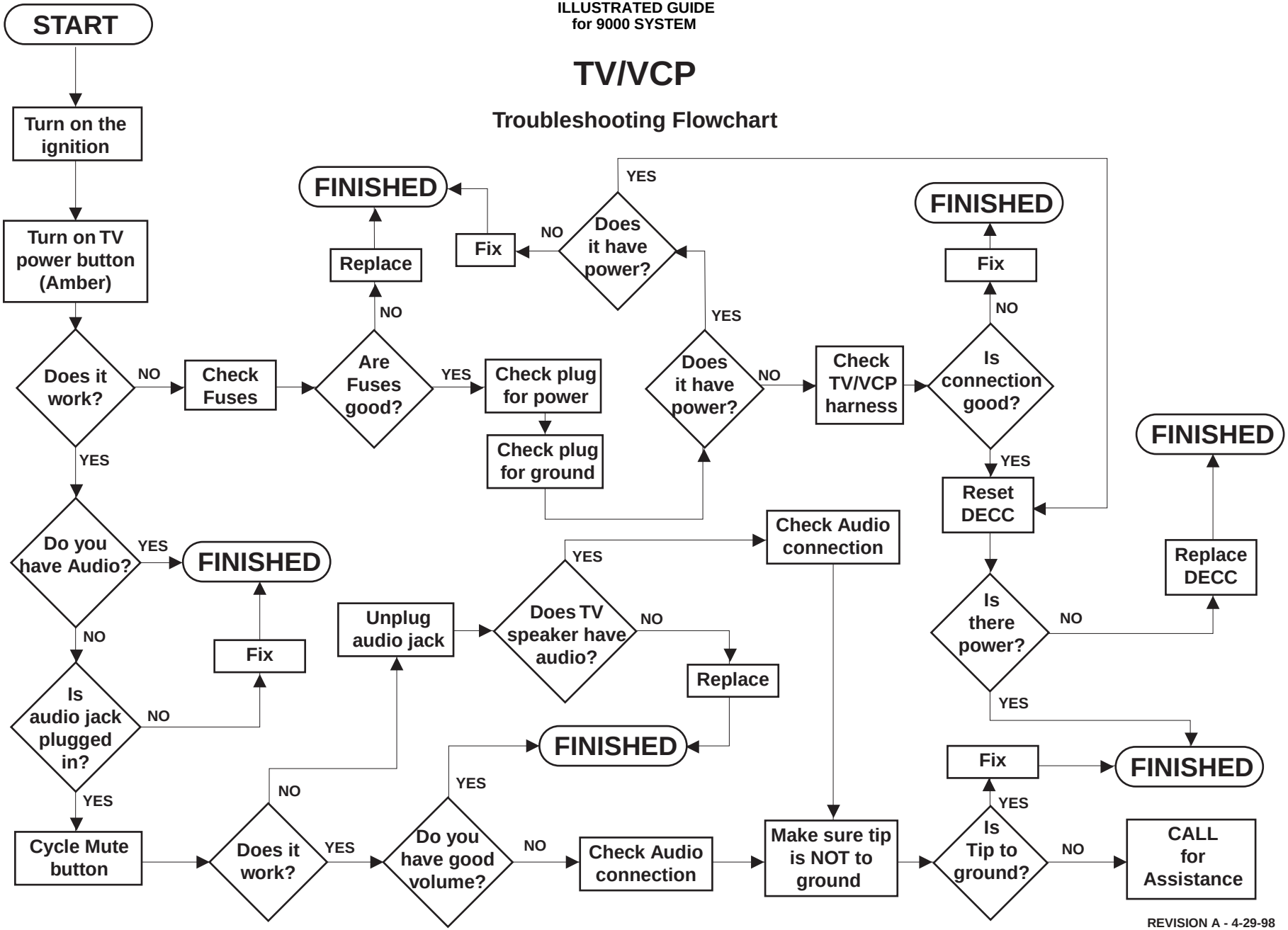
TV/VCP

Troubleshooting Flowchart



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Instructions for Resetting the DECC

ASTRO

1. Disconnect the **NEGATIVE (-)** battery terminal from the battery.
2. Wait 10 seconds.
3. Reconnect the **NEGATIVE (-)** battery terminal to the battery.

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Instructions for Resetting the DECC

CHEVY

1. Disconnect the **NEGATIVE (-)** battery terminal from the battery.
2. Wait 10 seconds.
3. Reconnect the **NEGATIVE (-)** battery terminal to the battery.

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Instructions for Resetting the DECC

DODGE

1. Disconnect the **NEGATIVE (-)** battery terminal from the battery

   OR Remove **both** OEM fuses labled **"Van Conv Batt"** and

   "Van Conv Ign" located in the front of the fuse panel under the hood.

2. Wait 10 seconds.

3. Reconnect the **NEGATIVE (-)** battery terminal to the battery.

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Instructions for Resetting the DECC

FORD

1. Disconnect the **NEGATIVE (-)** battery terminal from the battery

   OR Remove OEM fuse #21 located in the fuse panel under the hood.

2. Wait 10 seconds.

3. Reconnect the **NEGATIVE (-)** battery terminal to the battery.

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Instructions for Resetting the DECC

GMC

1. Disconnect the **NEGATIVE (-)** battery terminal from the battery.
2. Wait 10 seconds.
3. Reconnect the **NEGATIVE (-)** battery terminal to the battery.

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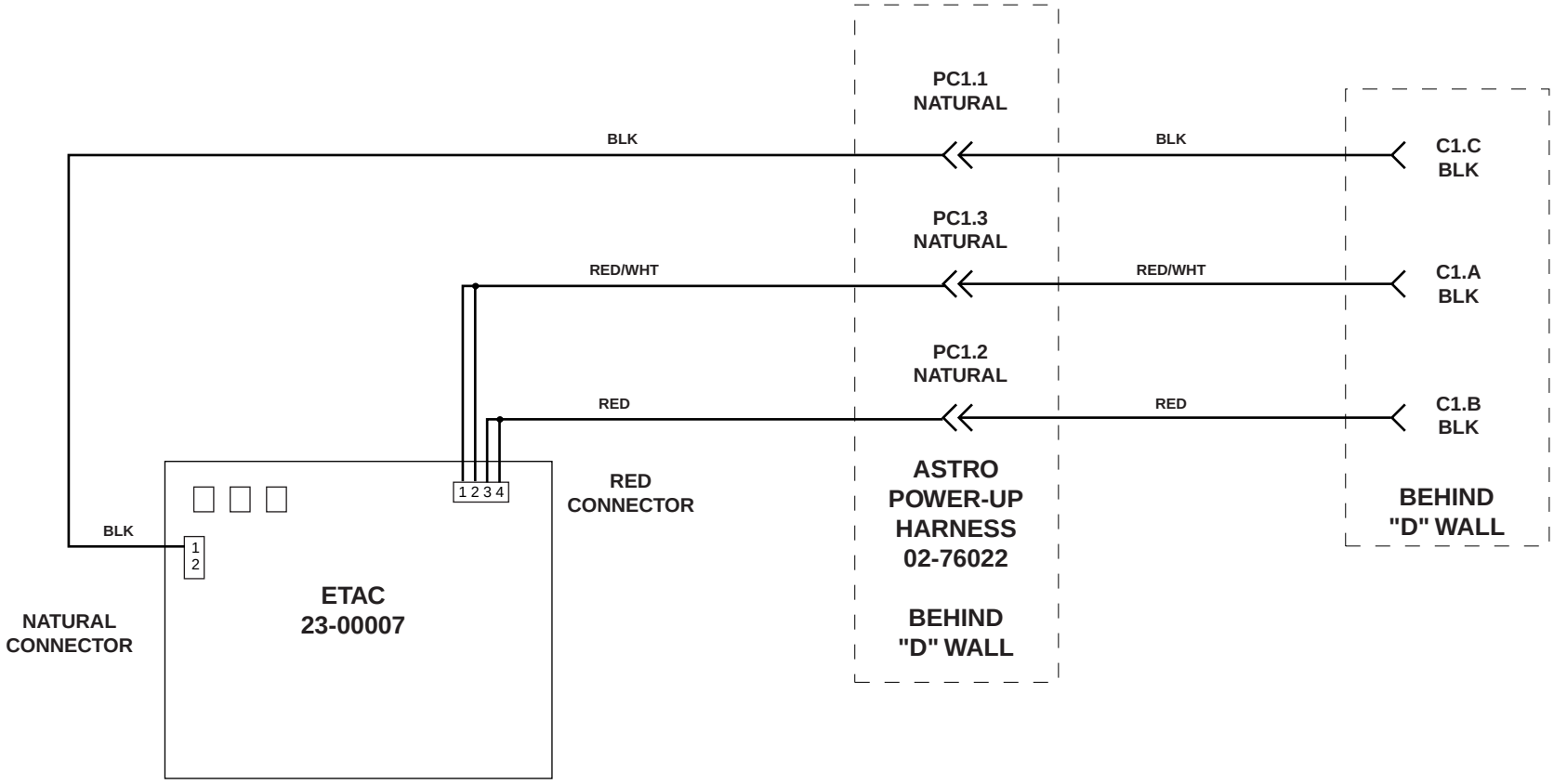
ILLUSTRATED GUIDE
for 9000 SYSTEM

ASTRO POWER-UP



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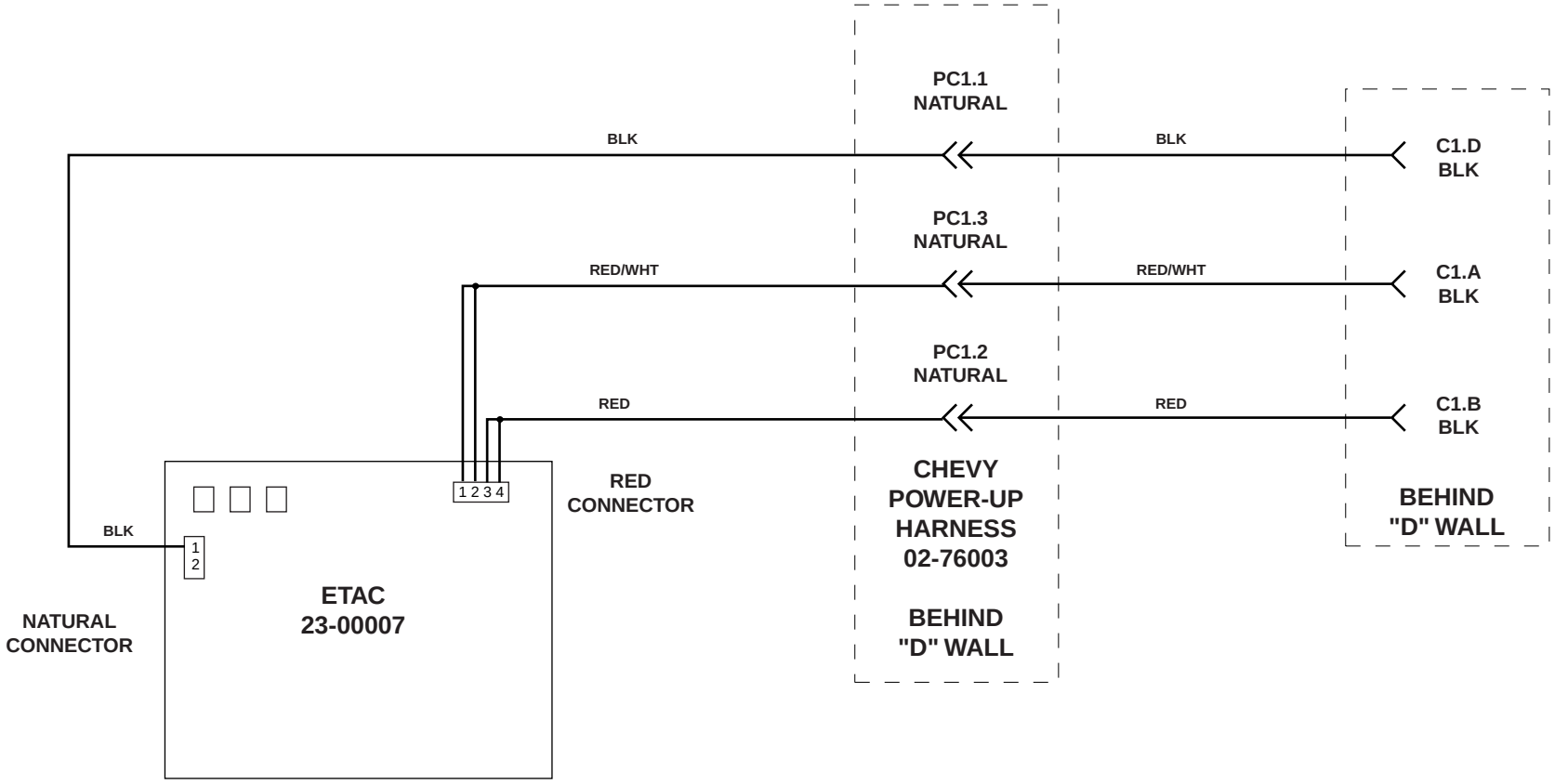
ILLUSTRATED GUIDE
for 9000 SYSTEM

CHEVY POWER-UP



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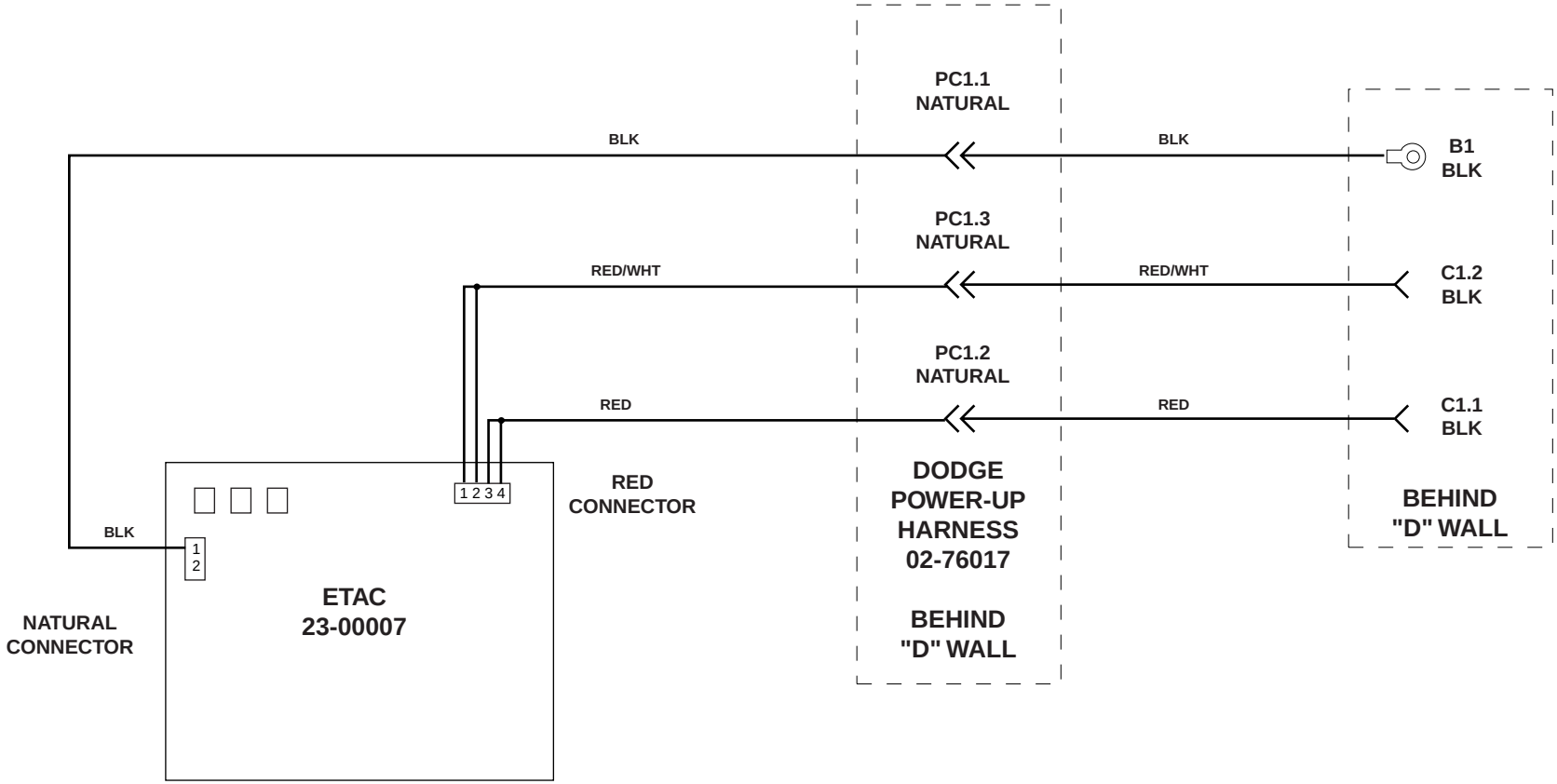
DODGE POWER-UP



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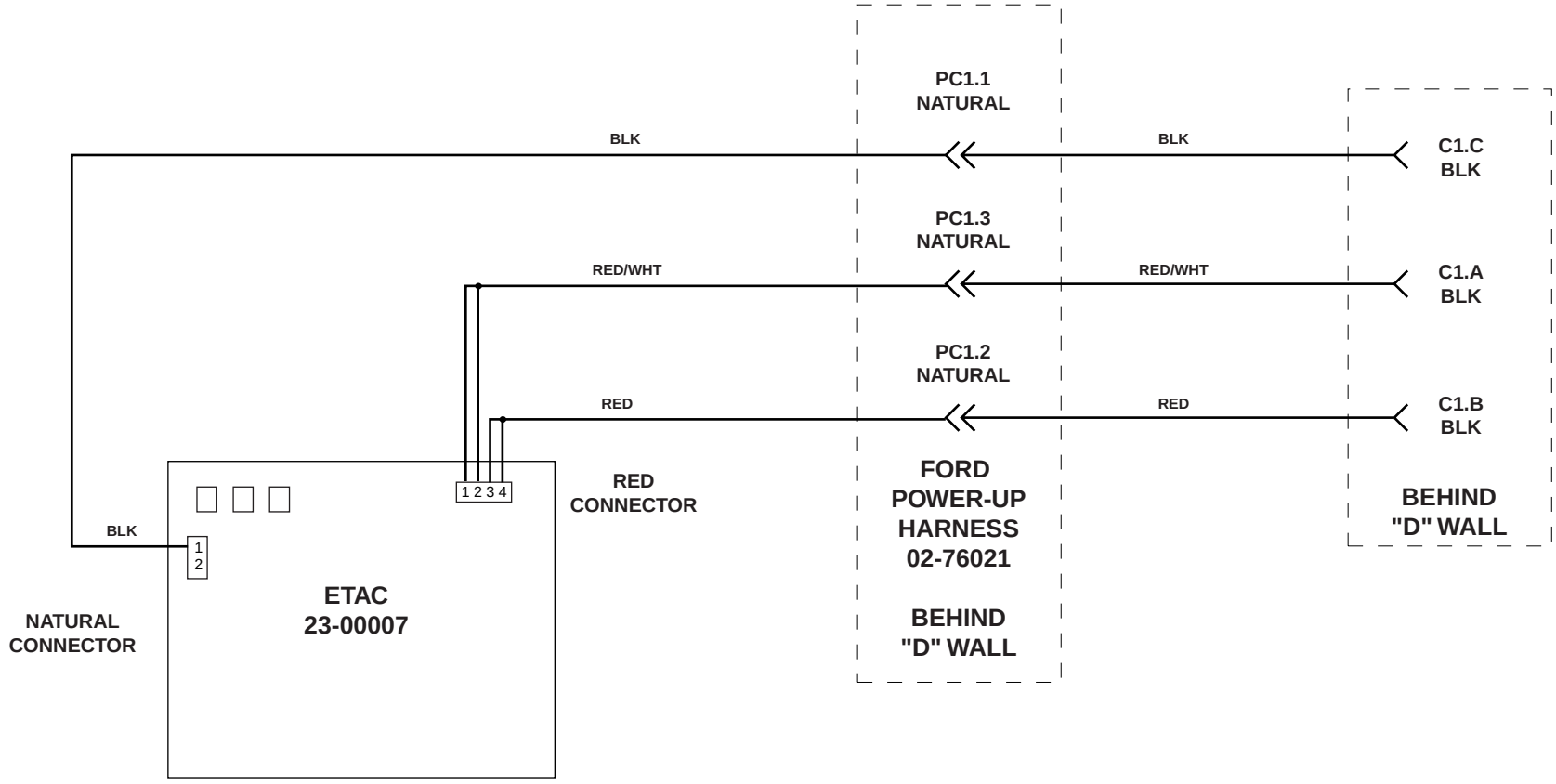
FORD POWER-UP



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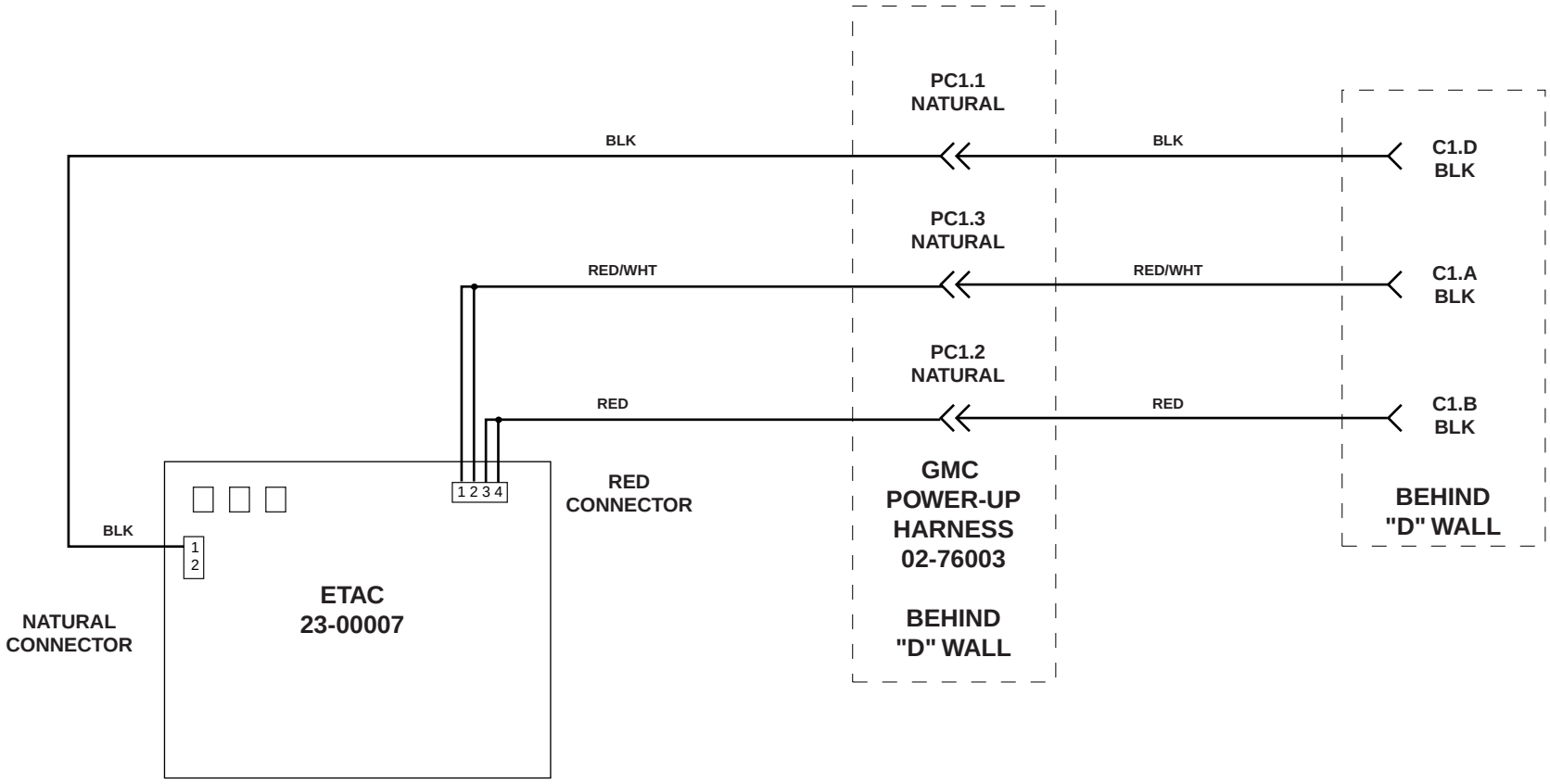
GMC POWER-UP



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EMI

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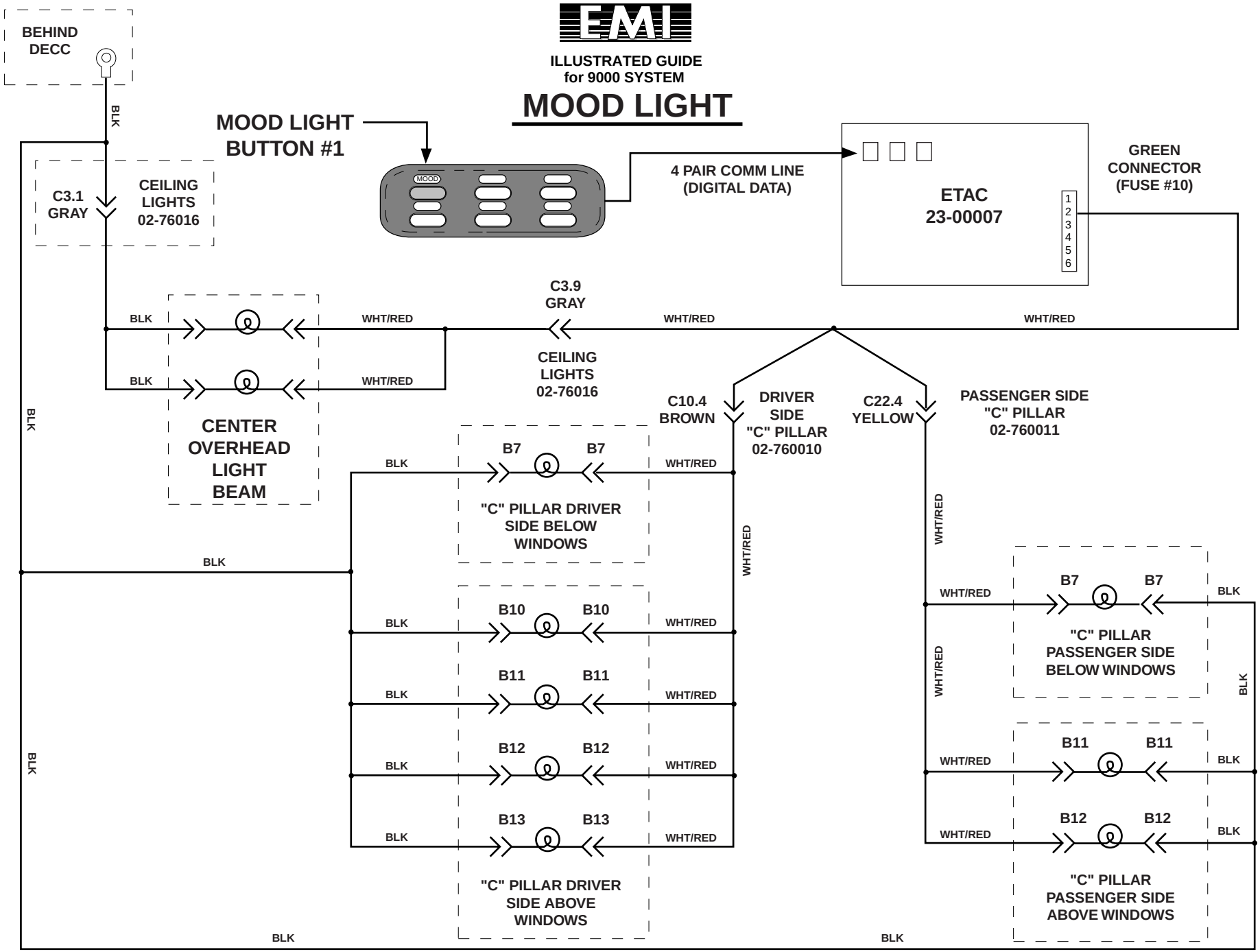
for 9000 SYSTEM

MOOD LIGHT



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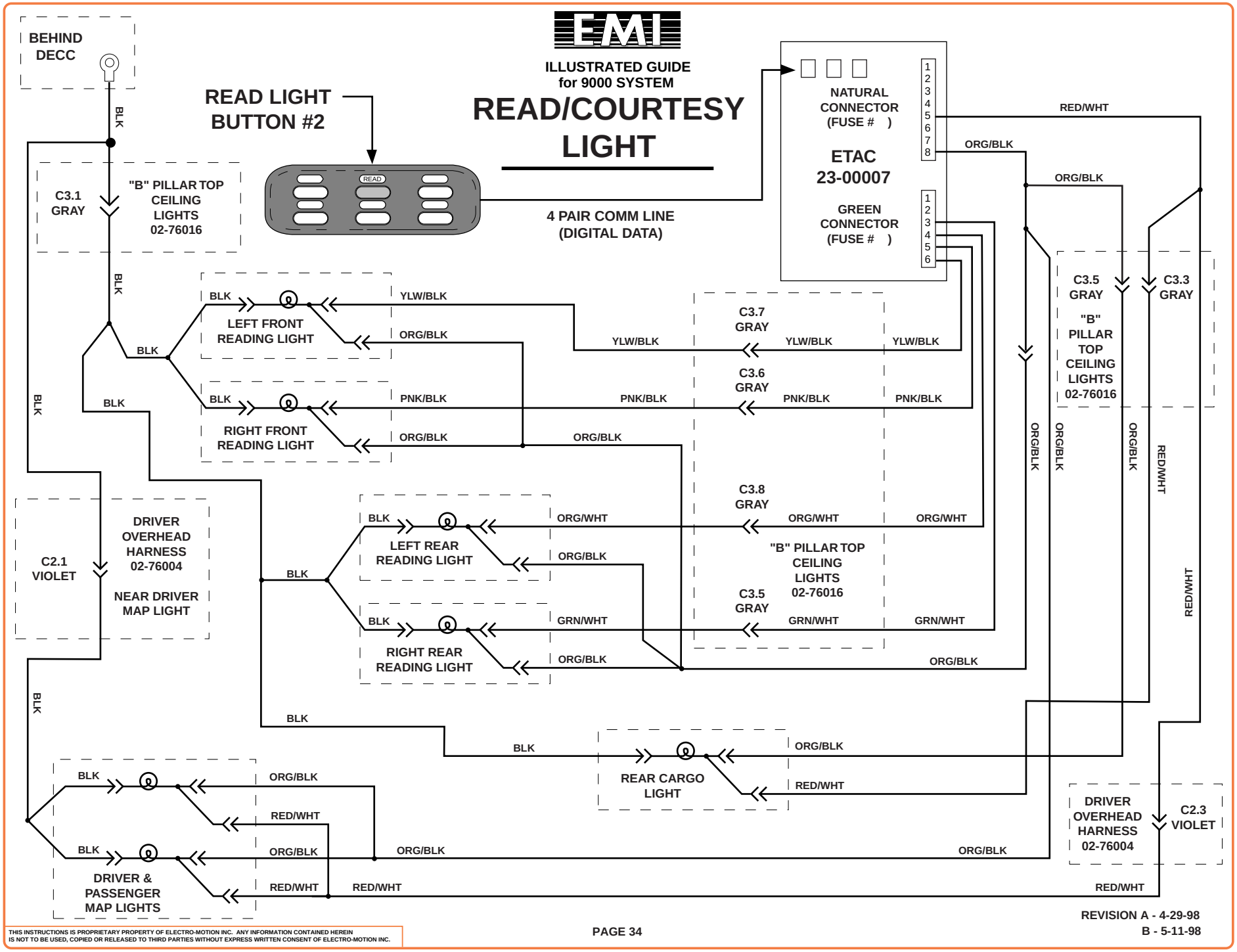

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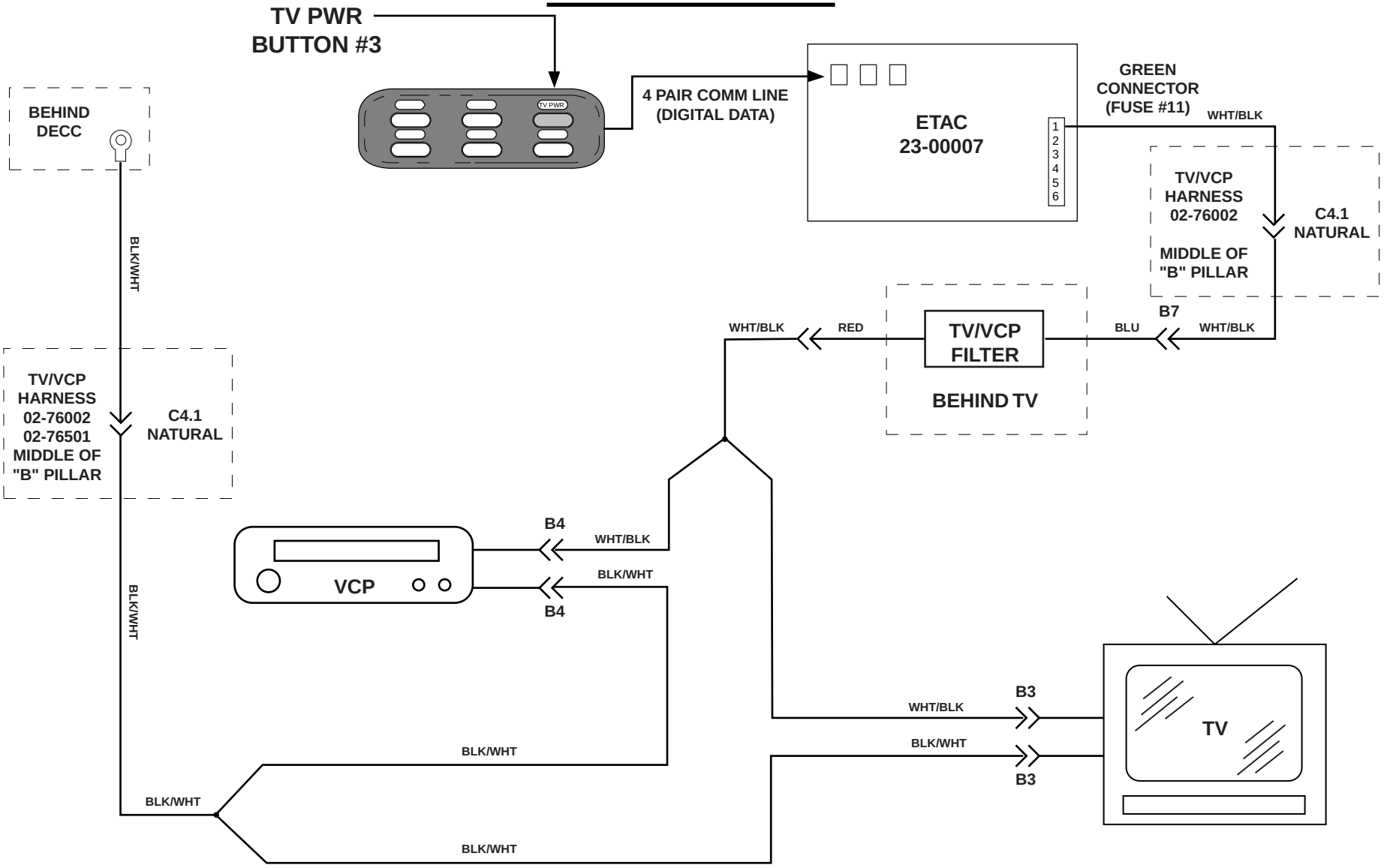
REVISION A - 4-29-98
B - 5-11-98

ILLUSTRATED GUIDE
for 9000 SYSTEM

TV/VCP POWER



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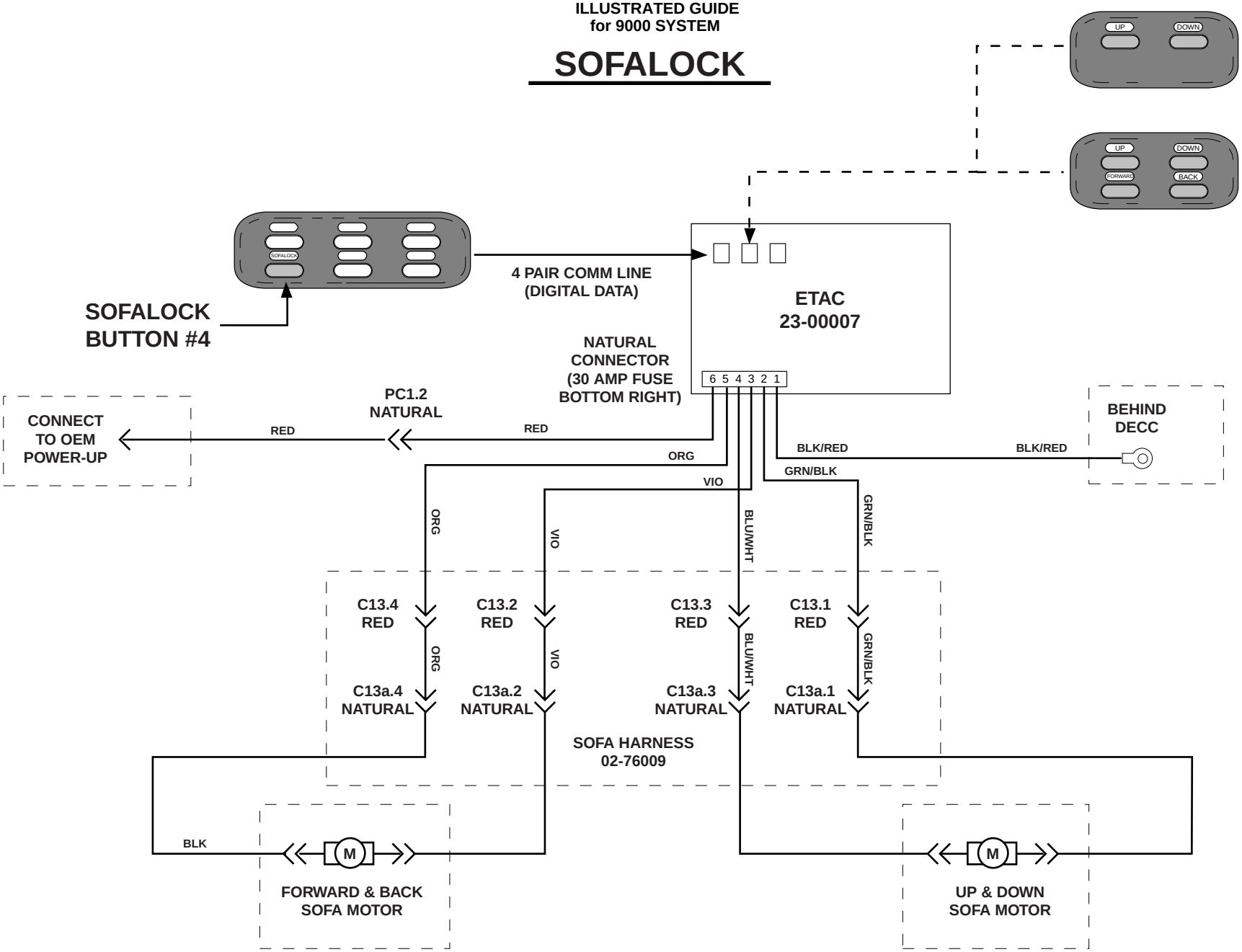
B - 5-11-98

ILLUSTRATED GUIDE
for 9000 SYSTEM

SOFALOCK



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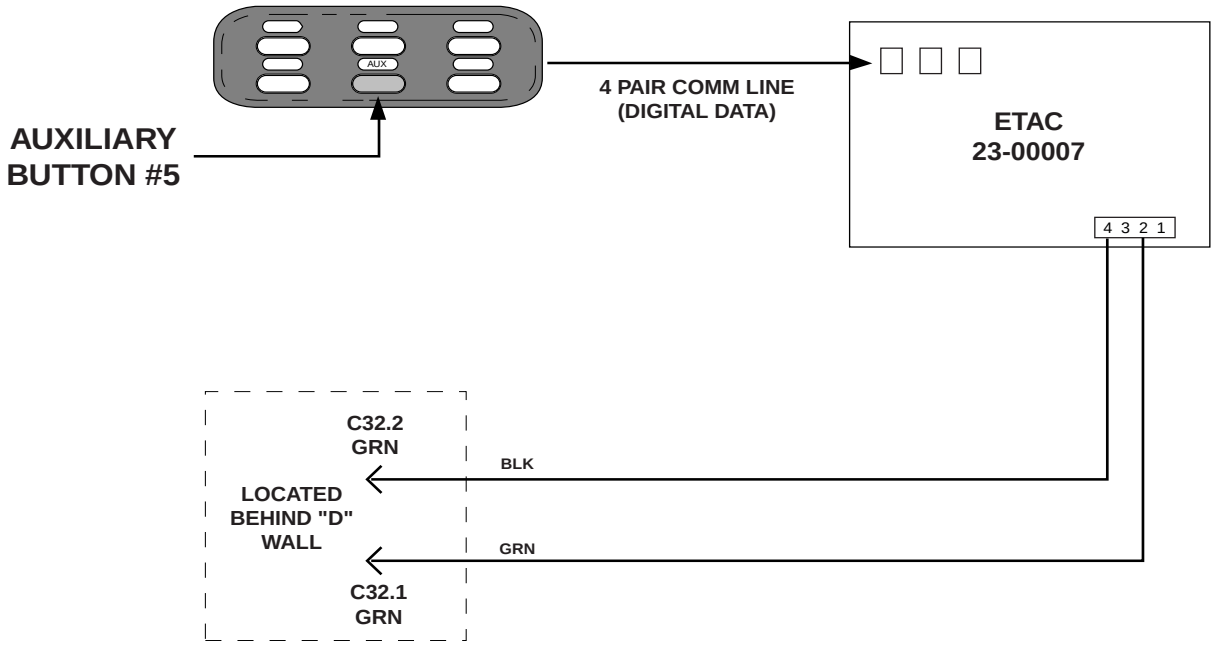
AUXILIARY



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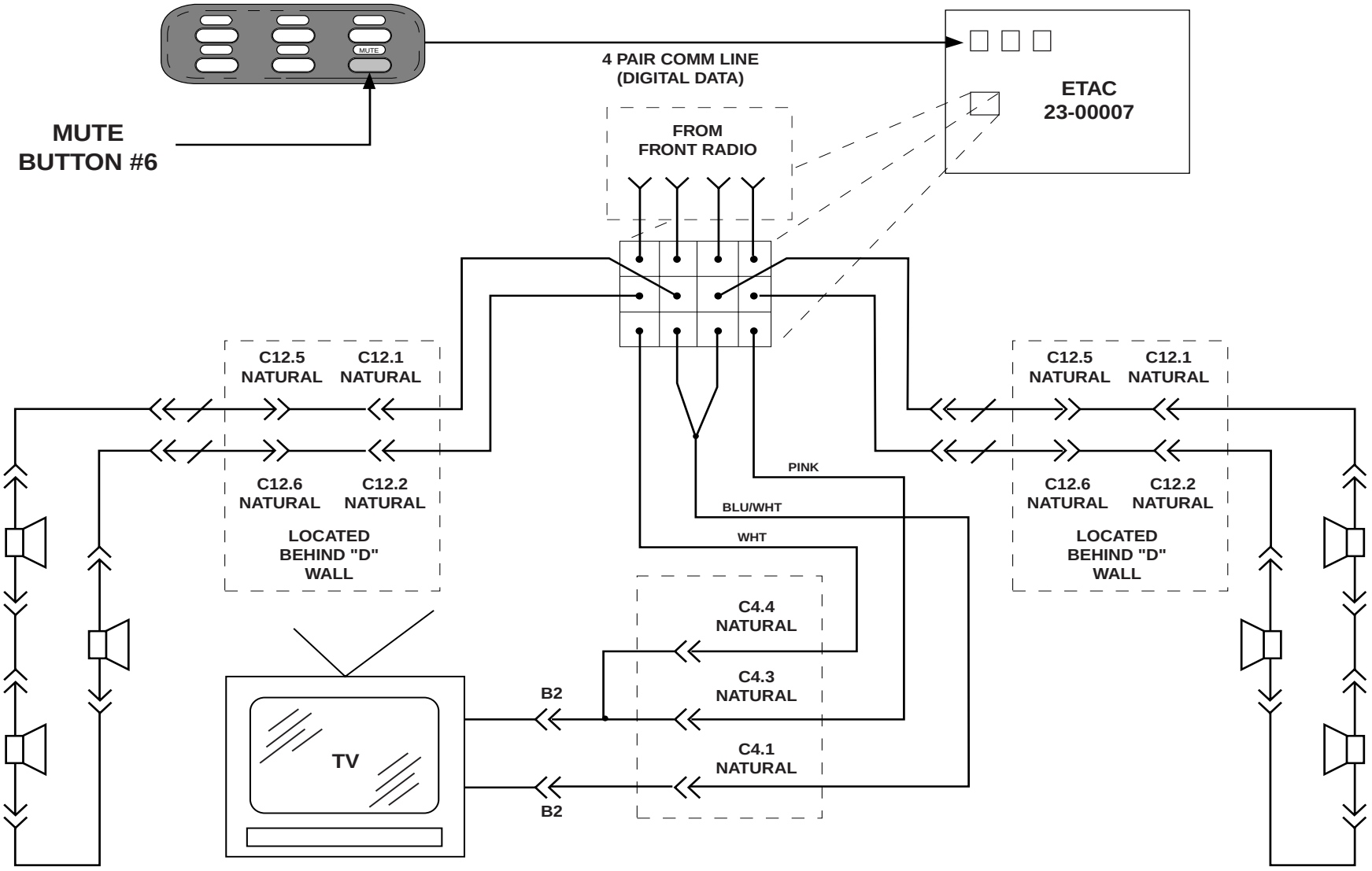
ILLUSTRATED GUIDE
for 9000 SYSTEM

MUTE



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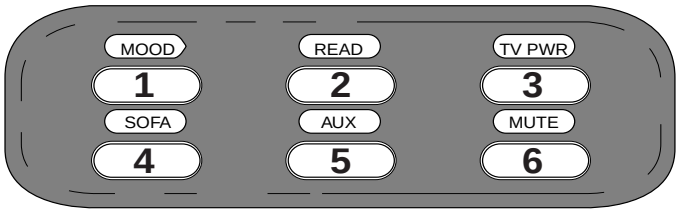
PROGRAM SEQUENCES

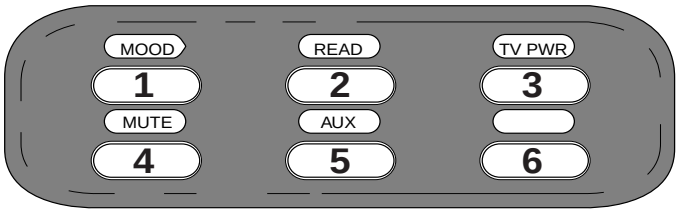
STANDARD - 6 BUTTON SWITCH



BUTTON SEQUENCE

PRESS: 1, 2, 3, 4, 5, 6

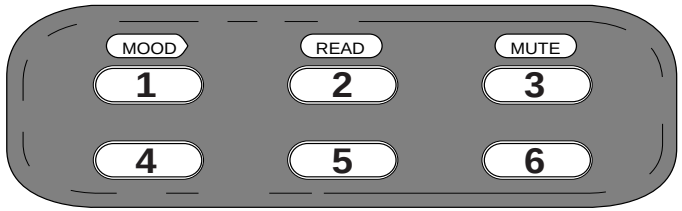
5 BUTTON SWITCH (NO SOFA)



BUTTON SEQUENCE

PRESS: 1, 2, 3, 6, 5, 4

3 BUTTON SWITCH (NO SOFA & NO TV/VCP)



BUTTON SEQUENCE

PRESS: 1, 2, 6, 3, 4, 5

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LABOR TIMES PICKUP TRUCK
FORD AND DODGE

	Ford	Dodge
Dr. Bottom Cover	1.0	1.5
Dr. Back Cover	1.0	1.5
Pass Bottom Cover	1.0	1.5
Pass Back Cover	1.0	1.5
Console Back Cover	.5	.5
Console Bottom Cover	.5	.5
Jumpseat Back Cover	1.5	1.5
Jumseat Bottom Cover	1.5	1.5
98 Jumpseat Back Cover	.5	.5
98 Jumseat Bottom Cover	.5	.5

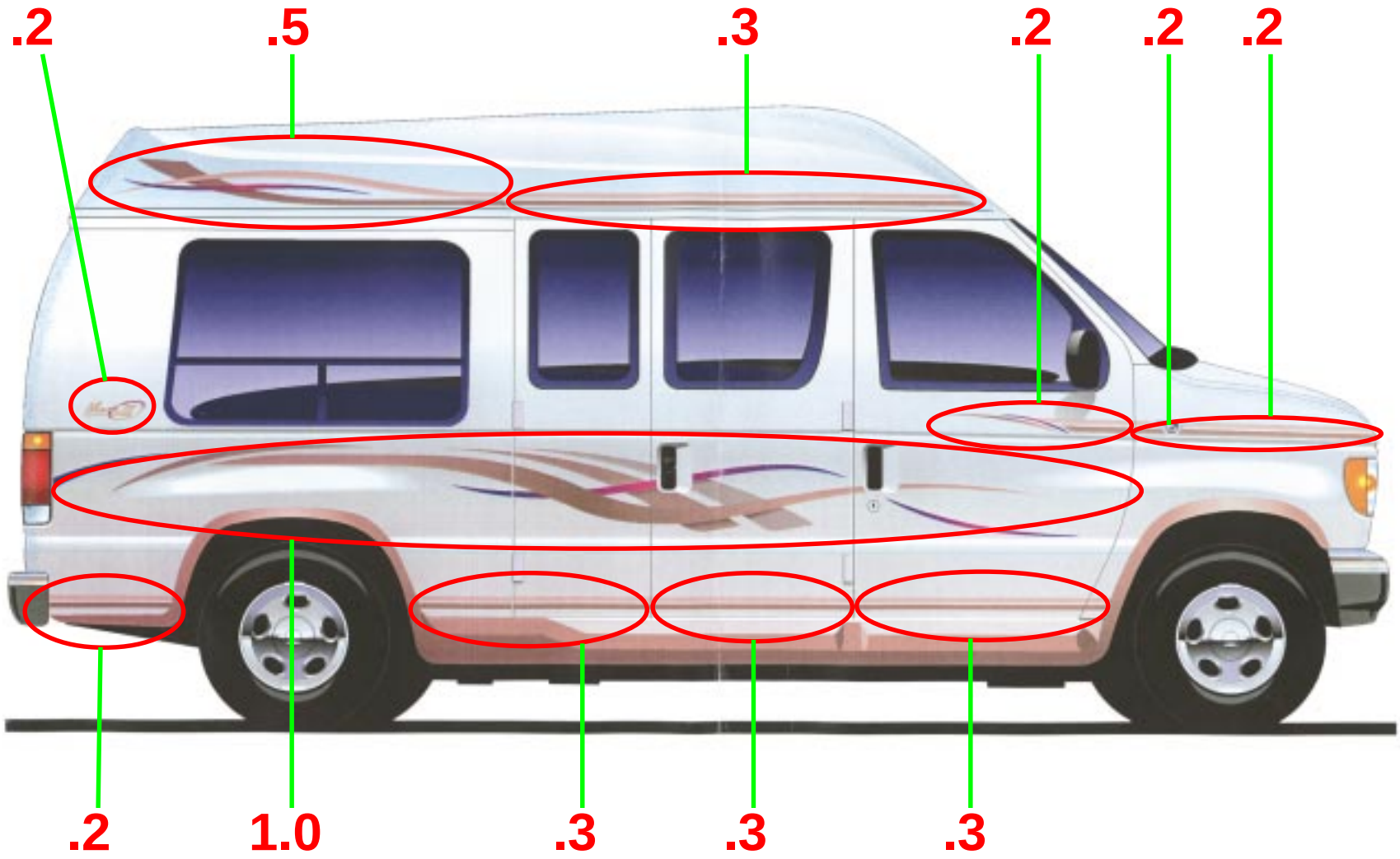
LABOR TIMES
NEW CHEVY DYNASTY OR ULTIMA

	Dynasty	Ultima
Complete Drivers Seat	.5	.5
Complete Passenger Seat	.5	.5
Console	.5	.5

(LSSI CHEVY)
PAY GM FLAT RATE TIMES

LX WITH OPTIONALGRAPHICS

LABOR TIMES



HOOD LOGO - .2
HOOD TAPE - .3
SPORT TOP REAR LOGO - .2
CARGO DOOR REAR DRIVER GRAPHICS - .3
CARGO DOOR REAR PASSENGER GRAPHICS - .3

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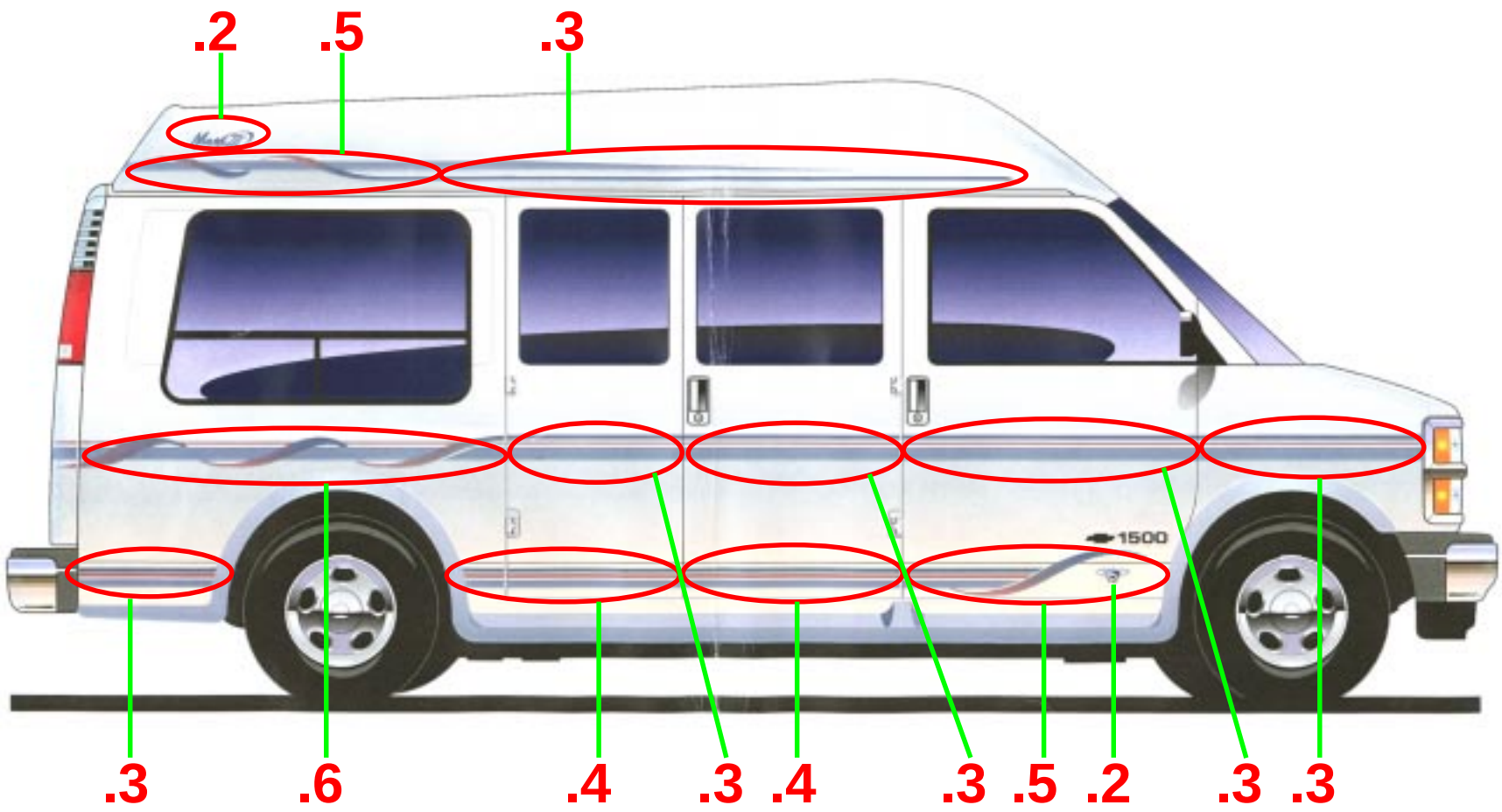
LX WITH STANDARD GRAPHICS

LABOR TIMES



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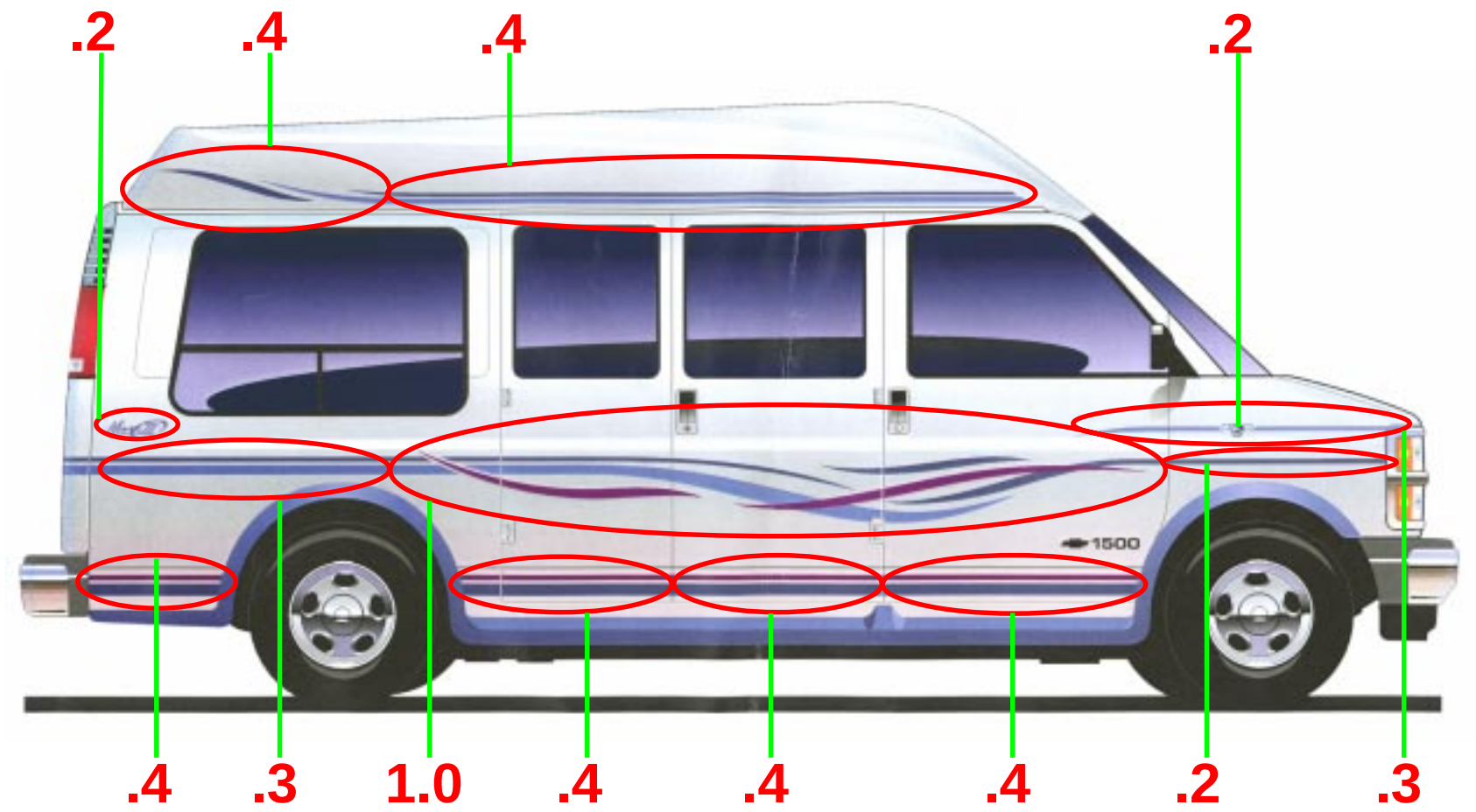

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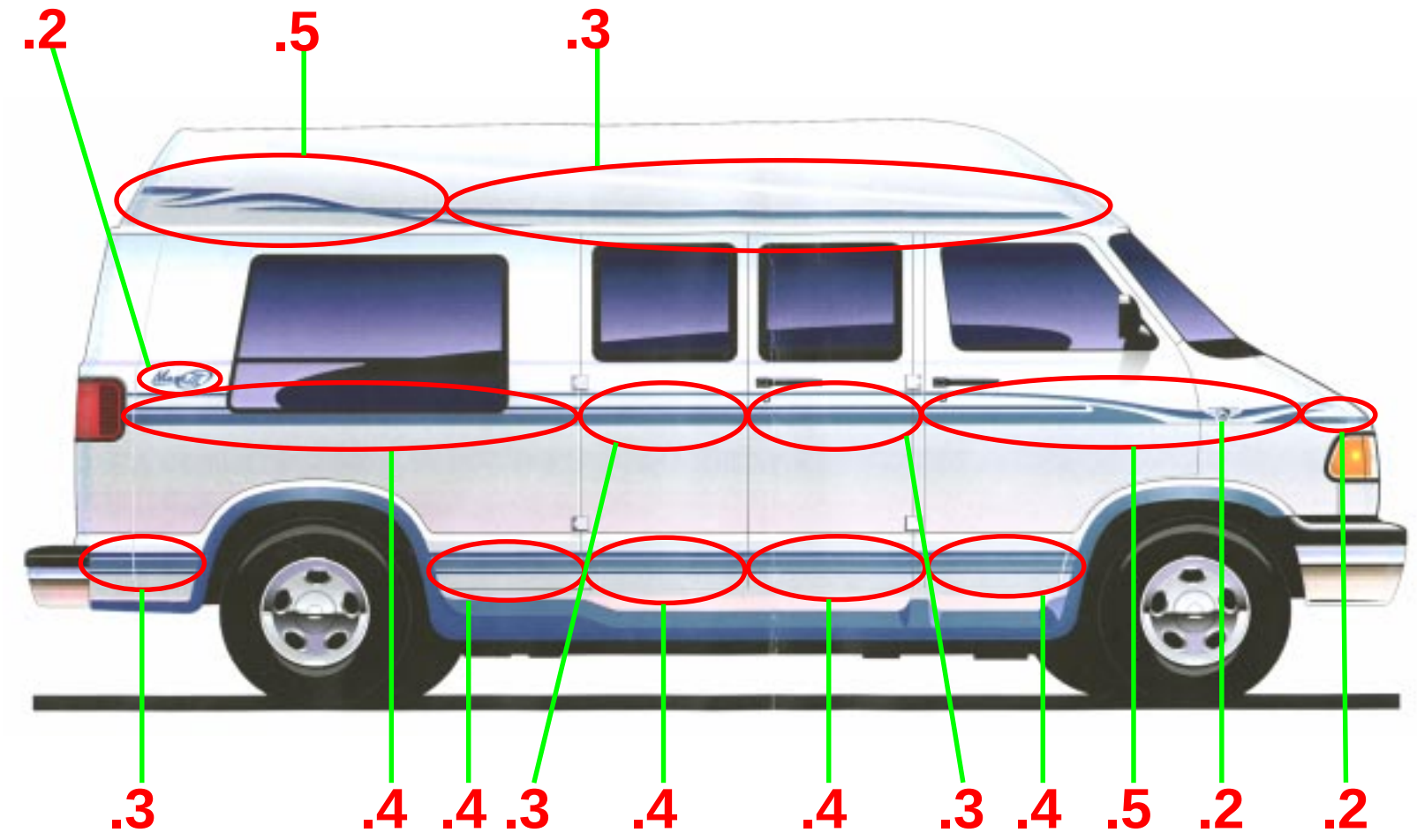

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CARGO DOOR REAR DRIVER GRAPHICS - .3
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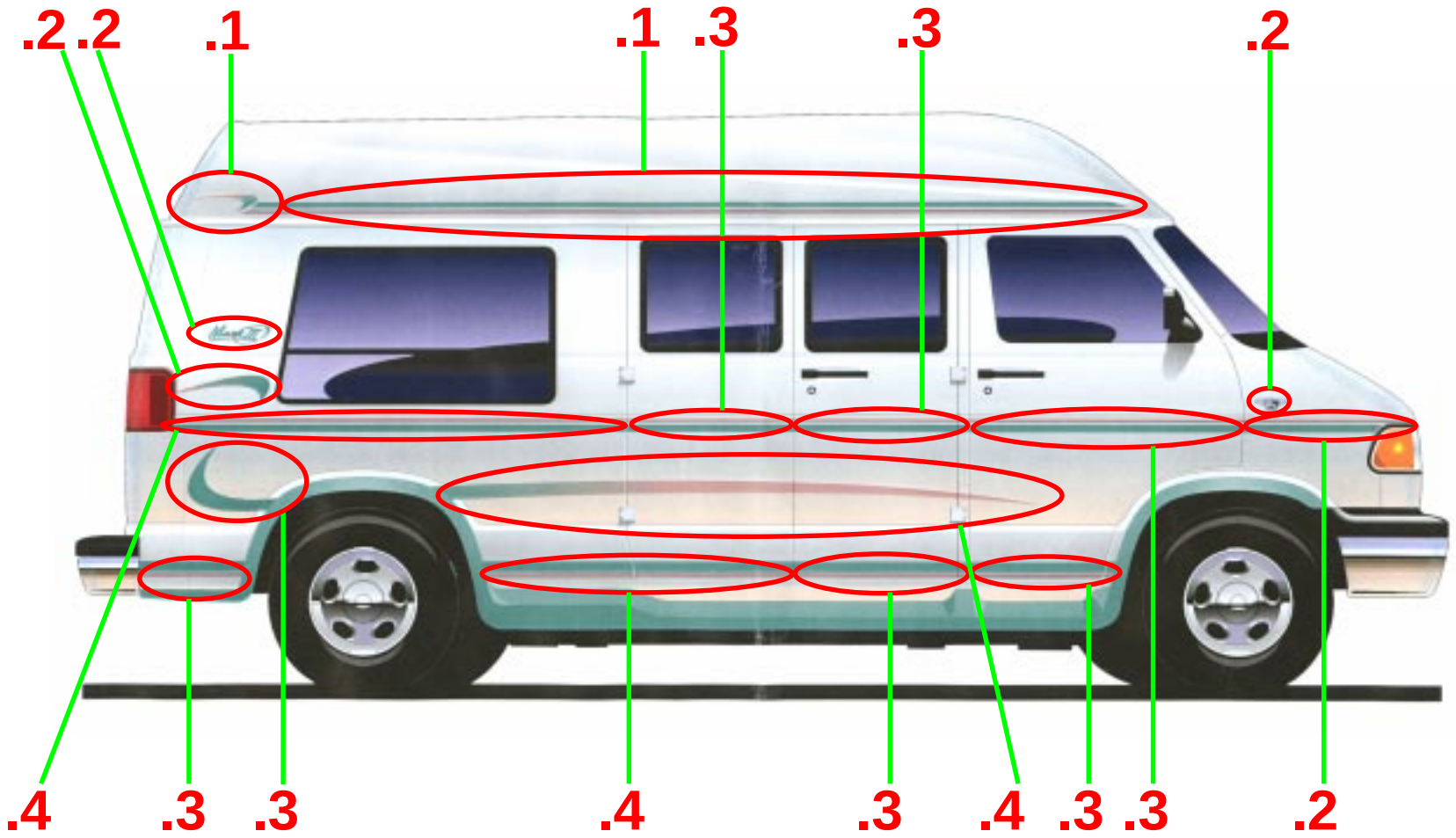
SE WITH OPTIONALGRAPHICS

LABOR TIMES



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SPORT TOP REAR LOGO - .2
CARGO DOOR REAR DRIVER GRAPHICS - .3
CARGO DOOR REAR PASSENGER GRAPHICS - .3

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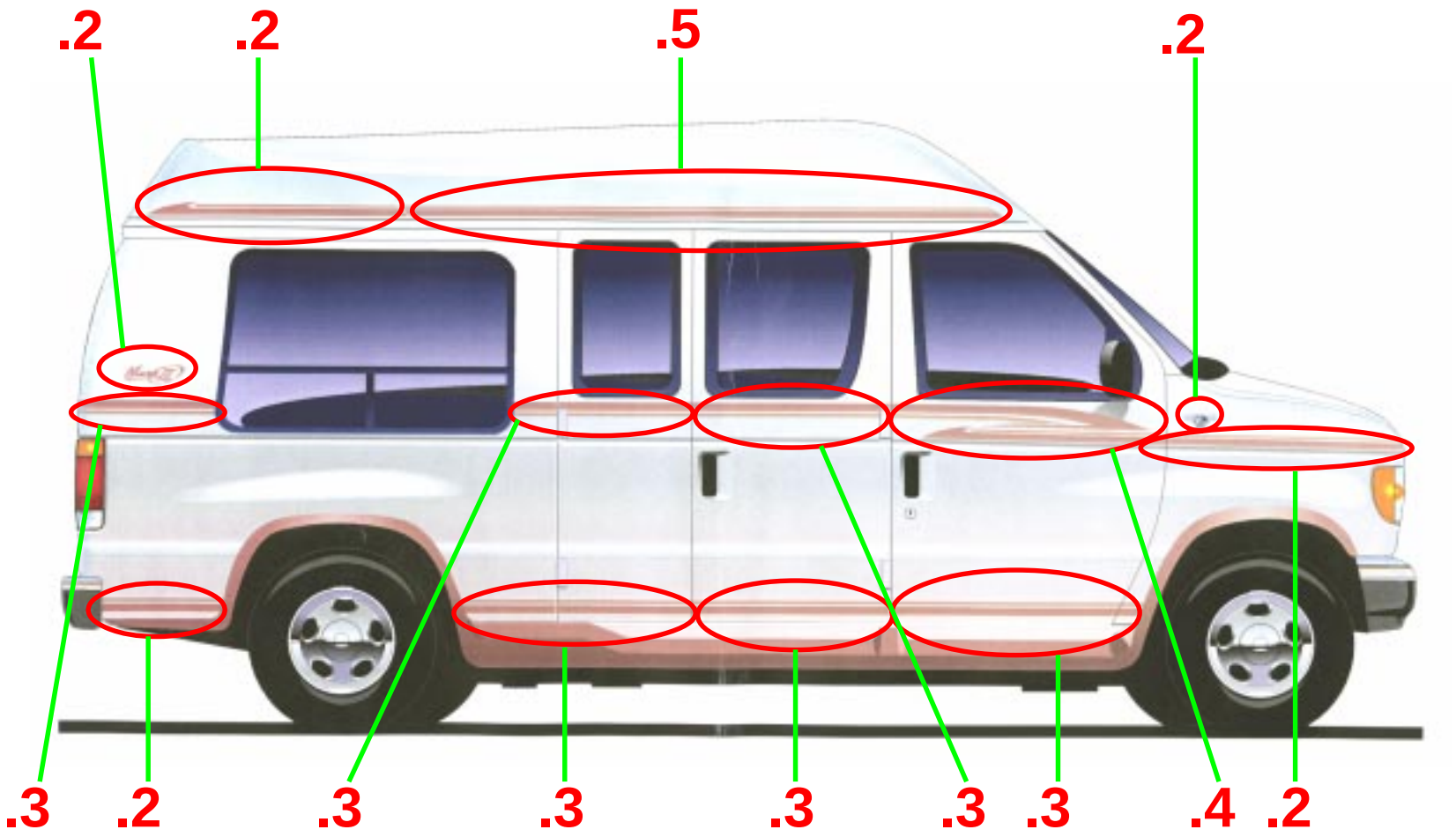
LABOR TIMES



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